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USSR Report

HUMAN RESOURCES

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CONTENTS

/9987

LABOR

FORMATION OF MATERIAL INCENTIVE FUND IN EXPERIMENT

Moscow FINANSY SSSR in Russian No 12, Dec 85 pp 24-29

[Article by Candidate of Economic Sciences V.T. Parasochka, department chief at NIFI [Scientific Research Institute of Finance]: "On the Practice of Planning and Formation of Incentive Funds under the Conditions of the Experiment"]

[Text] As of 1 January 1984, enterprises and production associations of the USSR Ministry of Heavy and Transport Machine Building, the USSR Ministry of the Electrical Equipment Industry, the UkSSR Ministry of the Food Industry, the BSSR Ministry of Light Industry and Lithuania's Ministry of Local Industry were transferred to the economic experiment. Its goal is to implement a system of supplementary measures that will expand the rights of production associations and enterprises in planning and managerial activity, and to ensure an economic interest in achieving high production efficiency and in increasing responsibility for work results.

Enterprises and associations of the above ministries have now been working for 2 years under the economic experiment. They have evaluated new forms and methods of management, planning, financing, and economic stimulation.

Analysis of the work of production collectives shows that in 1984 the basic indicators of their work improved significantly. Favorable results were achieved in fulfilling the plan for production deliveries. Enterprises and associations of the UkSSR Ministry of the Food Industry, the BSSR Ministry of Light Industry, and the Lithuanian SSR Ministry of Local Industry fulfilled commitments 100 percent, the USSR Ministry of Heavy and Transport Machine Building--99.2 percent (compared to to 94.5 percent in 1983) and the USSR Ministry of the Electrical Equipment Industry--99.2 percent (compared to 97 percent). The plan for production sales volume was successfully fulfilled by: the USSR Ministry of Heavy and Transport Machine Building--101.2 percent, the USSR Ministry of the Electrical Equipment Industry--101.5 percent, the UkSSR Ministry of the Food Industry--102.1 percent, the BSSR Ministry of Light Industry--101.3 percent and the Lithuanian SSR Ministry of Local Industry--102.3 percent.

They also fulfilled the plan for growth in labor productivity: USSR Ministry of Heavy and Transport Machine Building--101.1 percent, USSR Ministry of the

Electrical Equipment Industry--102.2 percent, UkSSR Ministry of the Food Industry--102.8 percent, BSSR Ministry of Light Industry--103.2 percent, Lithuanian Ministry of Local Industry--102.3 percent. Only isolated enterprises failed to fulfill this plan: at the UkSSR Ministry of the Food Industry--3 enterprises, at the BSSR Ministry of Light Industry--2 enterprises, at the USSR Ministry of Heavy and Transport Machine Building--14.7 percent and at the Ministry of the Electrical Equipment Industry--9.1 percent.

The above ministries achieved reductions in production cost, which can be seen from the data in Table 1.

Table 1

Ministries	Outlays per ruble of commodity production, in kopecks		Reduction of outlays per ruble of commodity production, in percent	
	plan	actual	plan	actual
USSR Ministry of Heavy and Transport Machine Building	86.85	86.45	-1.3	-1.8
USSR Ministry of the Electrical Equipment Industry	87.99	87.52	-0.8	-1.3
UkSSR Ministry of the Food Industry	89.72	89.20	--	-0.3
BSSR Ministry of Light Industry	85.76	85.19	+0.5	+0.1
LiSSR Ministry of Local Industry	87.27	86.84	-0.4	-0.9

It should be noted that all the ministries overfulfilled profit plans: the USSR Ministry of the Electrical Equipment Industry--by 11.1 percent, the USSR Ministry of Heavy and Transport Machine Building--by 7.8 percent, the UkSSR Ministry of the Food Industry--by 9.4 percent, the BSSR Ministry of Light Industry--by 7.6 percent, the Lithuanian SSR Ministry of Local Industry--by 9 percent.

The improvement in the indicators of the enterprises' and associations' work during the experiment, was facilitated by several factors. Among them, those of significant importance are: strengthening of discipline, general rise of Soviet people's labor activity, creation of cost-accounting brigades, and others. The economic mechanism was an important influence on the work of production collectives, including the system of formation and use of economic incentive funds and the consumer goods fund [fond shirpotreba].

The scheme of forming a material incentive fund (FMP) at enterprises working under the economic experiment is as follows. The base sum (base) is used to derive the planned and actual amount of this fund. To do this the preceding year's plan is used.[1] The sum of the base fund remains unchanged given the condition that labor productivity growth in the annual plan is equal to the average annual growth of labor productivity for the 5 years preceding the plan year. In the event the above-indicated condition is lacking, the base is corrected by reducing it.

The planned material incentive fund is formed from the base fund (corrected where necessary) plus an additional sum of the fund calculated for reduction of outlays per ruble of commodity production as compared to the base year (in case of increased expenditures, the base fund is reduced).[2]

The actual amount of the material incentive fund is determined by correcting the planned amount of the fund in relation to the level of reduction (or increase) of outlays per ruble of commodity production. The fund is further increased (or reduced) depending on fulfillment of the delivery plan, growth of consumer goods production per ruble of the wage fund, and the amount of incentive increases.

The work practice of enterprises under the new conditions has shown that the mechanism of forming the material incentive fund is, on the whole, acceptable. Production collectives, aided by the system of planning and forming the material incentive fund, acquire an interest in improving the indicators of financial management activity and raising production efficiency. At many enterprises these funds have grown significantly. Growth plotted by making comparison to the preceding year and in comparison to the plan. For example, compared to the preceding year, the fund grew 45.6 percent at the Tomsk Electric Lightbulb Plant, 75.4 percent at Kolchugino Elektrokabel Plant and 105.9 percent at Bavleny Electrical Machinery Plant. The plan for the fund was overfulfilled by: Sibelektromotor Production Association--48.7 percent, Elektroizolit Production Association--62.3 percent and the Podolsk Battery Plant--103.4 percent. The new method of fund formation thus makes it possible to increase funds significantly through significant overfulfillment of the plan for the material incentive fund.

Growth of funds occurs through growth in fund-forming and fund-correcting indicators and through improvement in finance management activity. But, as shown by experience, growth of funds at many enterprises significantly outstrips growth of efficiency indicators. It is sufficient to compare the profit growth rate (as one of the most important indicators for measuring production efficiency) and the growth rates of material incentive funds. Analysis has shown that growth of funds significantly outstrips profit growth

at approximately 20-30 percent of the enterprises. These include: Podolsk Battery Plant (37.9 percent--fund growth and 9.8 percent--profit growth), Kaliningrad Railroad Car Building Plant (12.1 and 46.1 percent [sic]) and Irkutsk Heavy Machine Building Plant imeni V.V. Kuybyshev (42.1 and 15.8 percent). If we consider that the bulk of profit plan overfulfillment at most enterprises occurs through incentive increase, then disproportions in growth of efficiency (profit) and funds are still more marked. On the whole, the growth rate of funds at approximately three enterprises out of every four outstrips profit growth.

The required proportions between growth of the material incentive fund and of the profit plan are basically adhered to in planning. Disproportions arise because of the fact that profit plans are overfulfilled to a lesser degree than the material incentive fund plan. Thus at Rasskazovo Low-Voltage Apparatus Plant imeni 60-Letiye VLKSM, the profit plan was fulfilled 104.6 percent and the plan for the material incentive fund--148.4 percent; at Elektroizolit Production Association--110.2 and 162.3 percent, respectively; at Novozybkov Induktor Plant--131.3 and 118.6 percent; Velikiye Luki High-Voltage Apparatus Plant--100.5 and 125.7 percent, and so forth.

In our view, growth of the material incentive fund should be tied to growth of production efficiency indicators, and above all to growth of profit. This can be done by using the following table which characterizes the relative amounts of profit overfulfillment and maximal growth of the material incentive fund as compared to its planned amount (Table 2).

Table 2 (percent)

Fulfillment of profit plan	Maximal growth (above-plan increase) of material-incentive fund
100-103	105
103-105	108
105-107	110
107-110	115
110-120	125
over 120	130

We must not permit cases of unjustified growth in funds (compared to growth of efficiency indicators). Acquisition of excessive funds by individual enterprises negatively affects the moral climate in collectives as well as monetary circulation and securing of consumer goods with unearned, but paid wages.

The question of the relation of labor productivity growth to that of wages is important. Practice has shown that the correlation between growth of labor

productivity and that of the average wage, when these are compared with the preceding year, has deteriorated with the exception of the BSSR Ministry of Light Industry, where it has remained as before (Table 3). Let us point out that at the USSR Ministry of Heavy and Transport Machine Building, the USSR Ministry of the Electrical Equipment Industry and the UkSSR Ministry of the Food Industry this correlation has significantly deteriorated. For the UkSSR Ministry of the Food Industry the average wage increase per percentage-point increase in labor productivity came to a ratio of 1.74:1. This includes the figure 1.16 derived by excluding payments from the material incentive fund from the calculations; at the same time in 1983 the relationship was observed (0.48). For the USSR Ministry of the Food Industry as a whole, growth of the average wage per percentage point in growth of labor productivity during 1984 amounted to 0.65, which is considerably better than at the UkSSR Ministry of the Food Industry.

Table 3

	Growth of average wage per percentage point in labor productivity growth		
	1984		1983
	total	not counting payments from material incentive fund	total
USSR Ministry of Heavy and Transport Machine Building	0.72	0.36	0.22
USSR Ministry of the Electrical Equipment Industry	0.62	0.36	0.29
UkSSR Ministry of the Food Industry	1.74	1.16	0.48
BSSR Industry of Light Industry	0.88	0.41	0.88
LiSSR Industry of Local Industry	0.87	0.55	0.68

* Excluding enterprises of the folk art trade.

The experiment is set up so that if the growth rate for average wages should outstrip labor productivity growth, an appropriate part of the material incentive fund will be held in reserve. This is the only economic lever we have for favorably influencing the relationship between growth in labor productivity and wage increases.

The material incentive fund formation mechanism allows us to increase funds independent of the indicator for wage growth per percentage point of labor productivity increase. We believe it makes sense to establish the correlation between wage and productivity growth for each enterprise separately, and to monitor it by applying sanctions in all instances where there are violations, regardless of how the plan for labor productivity growth is being fulfilled.

As analysis has shown, the actual material incentive fund depends 75-80 percent on the level of the planned material incentive fund, which in turn is determined by the base fund (base). The preceding year's plan is used as the base. Consequently the base material incentive fund exerts a big influence on the actual fund. This is why the chief element in the new system of fund formation is scientific validation of the level of the base material incentive fund. At present it is not validated. Its level largely depends on the tendency of fund growth characteristic of each enterprise. The approach here is individual. In our view, scientific criteria have to be developed for validation of the base in order to compute the planned material incentive fund.

In accordance with the adopted methodology, the base material incentive fund is reduced if growth of labor productivity in a plan year is planned below its growth rate for the preceding 5 years. Such a correction in our view is unjustified. The prescribed norm for reducing the material incentive fund is too small to exert a stimulating influence. Labor productivity at enterprises and production associations can be reduced in individual periods for objective reasons, for example, development of a new product, modernization, capital repair of basic production items (furnaces, units, automatic lines), a change in conditions of cooperation, the transfer of a structured production unit for an independent balance, and so on. It is necessary to proceed from the idea that the plan for growth of labor productivity (even where it is lower than the growth of prior years) is valid. If the fund is reduced for this reason, that means that it is assumed that the labor productivity growth plan is not intensive and is unvalidated. No grounds exist for proceeding from such a premise.

It should be noted that many all-union industrial associations and ministries subjectively set up plans for material incentive funds without taking into consideration the methodological requirements. One finds such a situation, for example, at Molodechno Plant for Power Semiconductor Rectifiers [ventel] imeni XXV syezda KPSS of the USSR Ministry of the Electrical Equipment Industry. Of course, there is no way to justify such a practice.

It should be pointed out that many enterprises have significantly increased material incentive funds both versus the plan and in comparison to the preceding year. What were the factors responsible for this?

Analysis of the increase (or decrease) in the material incentive plan has shown that the basic growth factor of the actual material incentive fund (as opposed to the planned sum) is incentive raises in wholesale prices for new high-efficiency products and for products with the state Seal of Quality. Thus at the Sibelektromotor Production Association, the material incentive fund increased 48.7 percent versus the plan, including through an incentive raise of 29.8 percent; at the Rasskazovo Low Voltage Apparatus Plant--48.4 and 42.8 percent, respectively; at the Gorokhovets Materials Handling Equipment Plant--44.5 and 42 percent, at Bryansk Machine-Building Plant imeni Lenin Production Association --65.5 and 46.8 percent; and at Altay Railroad Construction Plant--75.2 and 65.2 percent.

In our view, the time has come for a review of the distribution proportions of wage increase incentives. As shown by practice, almost 70 percent of incentive increases go into economic stimulation funds. This makes it possible to significantly increase the material incentive fund. It would be right to have the incentive increase considered in plan indicators: commodity (wholesale) and sold products, profit, labor productivity, and other indicators -- and only for those items which were certified and got an incentive increase in wholesale prices in the period before the plan year. Incentive increases for products produced in the course of the plan year should not be considered in the economic development plans of enterprises and production associations.

The pressing question at this time is reduction of the share of the incentive increase going into economic stimulation funds. We believe that in order to reduce this share the incentive increase (additional profit) should be distributed as follows: up to 50 percent should go to the economic stimulation fund, 10 percent to the enterprise's financial reserve, and the rest should be divided equally between the unified fund for development of science and technology and the state budget.

In accordance with the Statute on Creating and Using the Financial Reserve of Production Associations (Enterprises) Transferred to the Economic Experiment, one of the sources of an enterprise's financial reserve comes from part of the incentive increases in wholesale prices for high-quality products that have a production and technical designation, along with a corresponding reduction in their allocation to economic stimulation funds. The work experience of enterprises has shown, however, that production collectives do not take advantage of this source and that financial reserves are created only at isolated enterprises. This fact confirms once more the need for a revision of proportions in the distribution of incentive increases with the obligatory allocation of a part of them to the financial reserve of an enterprise.

The second most important factor, in terms of its significance for the growth of the material incentive fund, is additional deductions into this fund for 100-percent fulfillment of the products sales plan, taking into consideration delivery commitments. Owing to this factor, funds have been increased by 15 percent at: Millerovo Metallurgical Equipment Plant imeni Gavrilov, Altay Railroad Car Building Plant, Tomsk Electric Bulb Plant, Podolsk Battery Plant, and others.

The work experience of enterprises involved in the experiment has shown that the establishment of a 15-percent additional deduction into the material incentive fund for 100-percent fulfillment of the delivery plan served as an effective economic lever for stimulation of deliveries. Evidently the 15-percent addition to the material incentive fund should be retained in the future.

In accordance with methodological provisions on the formation and use of the resources of economic stimulation funds, one source of an additional increase to the material incentive fund for fulfillment of the delivery plan is a portion of the profit remaining at the disposal of production associations (or enterprises). Or, should this be insufficient, it can come through reduction of payments from profit into the budget. In practice there were cases where the source of formation of the 15-percent increase was profit which the plan had designated for transfer to the budget. For example, at Velikiye Luki High-Voltage Apparatus Plant, deductions into the budget were reduced because of an additional increase of the material incentive fund by 101,000 rubles, at Podolsk Battery Plant--78,000 rubles, and at Barnaul Transport Machine-Building Plant imeni V.I. Lenin--537,000 rubles.

The reduction of payments from profit into the budget through additional deductions into the material incentive fund constitutes an infringement on the interest of the state budget. Only the profit remaining at the disposal of production associations as well as reserves and central funds of higher organizations should serve as a financial source for increasing the material incentive fund for 100-percent fulfillment of the production delivery plan.

In accordance with methodological provisions, the material incentive fund of enterprises was reduced by 3 percent for each percentage point by which the production delivery plan was underfulfilled. For this reason the fund was reduced at: Gorokhovets Materials Handling Equipment Plant--by 1.7 percent, South Ural Machine Building Plant--by 4.5 perceent, Kuznetsk Machine Building Plant--by 14.3 percent, Irkutsk Heavy Machine Buildign Plant imeni V.V. Kuybyshev--by 3 percent and Metallist Plant (Kolpashevo)--by 0.6 percent.

On the whole, the role of sanctions for nonfulfillment of the delivery plan is insignificant. Financial sanctions for breach of commitments should be substantial. It would be useful to set a percentage for reduction of deductions into incentive funds in the amount of 5 percent for each percent of delivery-plan nonfulfillment, which would make it possible to increase the accountability of enterprises' collectives for fulfillment of contractual obligations.

The third most important factor in terms of growth of the material incentive fund is additional deductions (or decrease in deductions) for each percent of reduction of outlays per ruble of commodity production. For the calculation of additional deductions, a norm is used in the amount of 5 percent of the material incentive fund for each percent of reduction in outlays per ruble of commodity production.

Analysis of actual practice in material incentive fund formation has shown that production cost as a fund-forming indicator plays an auxiliary role in

the formation of the fund. At most enterprises, the fund has grown (or been reduced) up to 5 percent due to this factor and only in extreme situations (for about one enterprise in five) have more significant deviations been observed. For example, at Tomsk Electric Bulb Plant (+8.3 percent), Electroizolit Production Association (+5.1 percent), Sibtyazhmash Production Association (-5.8 percent), and Gorokhovets Materials Handling Equipment Plant (+8 percent).

There are enterprises (although they are an exception) where the third factor significantly influences the size of the fund. For example, the Savvinskiy Electrical Machinery Plant increased the material incentive fund by reducing production cost by 25.9 percent. But here one must ask if the plan target for the indicator of outlays per ruble of commodity production is set high enough. It would be advisable to increase the role of production cost within the system of fund formation by raising the norm from 5 to 7 percent.

At some enterprises, the material incentive fund has been corrected in relation to production growth of consumer goods per ruble of the wage fund in conformity with the Temporary Statute on Stimulation for 1983-1985 of Growth in Consumer Goods Production approved by Gosplan USSR, the USSR Ministry of Finance, the USSR State Committee for Labor and Social Problems, and the AUCCTU on 11 February 1983. The size of the increase (or reduction) of the fund for this indicator is insignificant (mainly 1-3 percent). The maximum size of the increase: for the USSR Ministry of Heavy and Transport Machine Building, at the Kambarka Machine Building Plant -- 5.7 percent; for the USSR Ministry of Electrical Equipment, at Elektroizolit Production Association -- 5.5 percent.

In our view, for the purpose of simplifying the fund-formation system, it would be useful not to use the indicator of consumer goods growth per ruble of the wage fund for fund correction, since it practically has no influence on the size of the material incentive fund. The stimulating role of the fund in increasing the production of consumer goods should grow with its use in awarding bonuses to workers, engineering and technical personnel, and employees.

The results of the analysis showed that the manner of forming the material incentive fund at enterprises involved in the economic experiment is acceptable. At the same time, the need for further improving and perfecting it is obvious.

According to the conditions of the experiment, the fund for social and cultural measures and housing construction is formed as follows: The base-year plan is taken and the amount of the fund's growth is added to it for each percentage point of labor productivity growth according to the norm in the amount of 2 percent. The resultant sum of the fund is used as the plan size.

The actual fund for social and cultural measures and housing construction is determined by correcting the plan amount of the fund depending on overfulfillment (or underfulfillment) of the labor productivity plan and its increase through incentive increases.

Practice has shown that the fund for social and cultural measures and housing construction basically depends (75-80 percent) on the amount of the fund adopted as the base. Validation of the base is an important element of the process of planning the fund. This also applies to the manner of forming the material incentive fund. The question of planning from the base has been repeatedly discussed in the economic literature. The effectiveness of the new procedure of fund formation thus depends on the degree of validity of the fund's base amount. The actual size of the fund for social and cultural measures and housing construction is influenced by two additional factors. The first is overfulfillment (or underfulfillment) of the plan for labor productivity growth, and the second is incentive increases.

Practice has shown that corrections of the fund due to deviations from the labor productivity plan amount as a rule anywhere from 3 to 7 percent. Thus at Darasun Mining Equipment Plant the fund was increased for overfulfillment of the labor productivity plan by 4.8 percent, at Gorokhovets Materials Handling Equipment Plant--by 3.2 percent, at Sibelektromotor Production Association--by 53 percent and at Velikiye Luki High-Voltage Apparatus Plant--by 4.6 percent. It was reduced at Svir Vostsibelement Plant by 5.6 percent and at Sibtyazhmash Production Association--by 2.6 percent.

More substantial deviations are rarely encountered. For example, at the South Urals Machine Building Plant, the planned fund for social and cultural measures and housing construction was reduced by 29.4 percent for nonfulfillment of the labor productivity plan and at Vladimir Experimental Plant of the Design Bureau of Permanent Magnets, the fund was increased by 9.5 percent because of this factor. But these are extreme deviations.

Because of the second factor--the incentive increase--the fund has grown significantly at many enterprises. This especially applies to enterprises of the USSR Ministry of Heavy and Transport Machine Building. Thus at the Darasun Mining Equipment Plant, the fund increased 19.1 percent due to the second factor, at Bryansk Machine-Building Plant imeni Lenin Production Association--63 percent, and at Irkutsk Heavy Machine-Building Plant imeni V.V. Kuybyshev--19 percent. In some cases, an almost twofold increase was observed.

In our view, it is necessary to increase the role of labor productivity in the fund-formation system. For this, correction norms of the fund for social and cultural measures and housing construction should be raised from 2 to 3 percent. On the other hand, it would be practicable to limit the growth of the fund due to incentive increases from above, for example, to 50 percent of the fund's amount.

On the whole, the manner of forming the fund for social and cultural measures and housing construction is acceptable. With its aid, growth of labor productivity and higher production quality are effectively stimulated.

Enterprises and production associations involved in the economic experiment form the consumer goods fund in conformance with Instruction No 130 on the Manner of Forming and Using the Consumer Goods Fund enacted by the USSR Ministry of Finance on 21 September 1983.

The new procedure for forming the consumer goods fund affords enterprises more beneficial conditions for its crediting, as compared to the situation of those production associations and enterprises not involved in the experiment. Under the new conditions of operation, the consumer goods fund is formed when the cost of waste materials amounts to 10 or more percent of the cost of all the raw and other materials, not counting the cost of auxiliary materials. At enterprises operating under ordinary conditions, the lower limit has been set in the amount of 50 percent.

Furthermore, at enterprises involved in the experiment, the percentage of the deduction going into the consumer goods fund is closely tied in to the relative share of waste materials in the total cost of raw and other materials expended in the production of goods and articles. The relationship is such that the bigger the relative share of wastes in the total cost of raw and other materials, the bigger the portion of profit going into the consumer goods fund.

The findings of the survey show that in 1984, at some enterprises, production of items from waste materials increased. Thus at the leading enterprise of Sibkabel Production Association, production of items from waste materials increased from 866,000 rubles in 1983 to 934,200 rubles in 1984 (107.8 percent). At the same time, the consumer goods fund grew from 87,000 to 112,000 rubles, that is, by 21.7 percent. At Kirskabel Plant, growth of products made from waste materials amounted to 8 percent, and the consumer goods fund increased by 67.7 percent. At the Middle Volga Transformator Production Association, the consumer goods fund grew from 183,000 to 255,000 rubles. At the same time, the relative share of products made from waste materials in the total volume of commodity production did not grow and remained at the former level--0.8 percent. At the Kolchugino Elektrokabel Plant, the fund increased from 128,000 rubles in 1983 to 172,000 rubles in 1984.

The fund for consumer goods made from waste materials is being established at roughly every 10th enterprise. In 1984, the number of enterprises that had formed a consumer goods fund grew somewhat compared to 1983. For example at Metallist Plant (Kolpashevo) no fund was created in 1983. But in 1984 12,000 rubles were allocated to the consumer goods fund. Deductions into the fund were also not made in 1983 at Kolomna Plant Production Association of the USSR Ministry of Heavy and Transport Machine Building, but 11,000 rubles were added to it in 1984.

Thus the following changes have now taken place at enterprises involved in the economic experiment in order to stimulate production output from waste materials and the formation of a consumer goods fund:

(a) the stimulating role of the fund for consumer goods from waste materials has grown;

(b) the number of enterprises forming consumer goods funds has increased;

(c) the size of the consumer goods fund is growing more rapidly compared to growth of production output from waste materials.

But, despite the granting of more favorable conditions to enterprises for forming a consumer goods fund, production wastes are being little used or are not being used at all at many of them.

FOOTNOTES

1. The base year for working out the 1984 plan is 1983 and for 1985 it is 1984.

2. At the UkSSR Ministry of the Food Industry and the BSSR Ministry of Light Industry, profit growth compared to the base year is being used as a fund-forming indicator and at the Lithuanian SSR Ministry of Local Industry--growth of profit compared to the base year.

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LABOR

ANALYSIS OF WAGE SCALE GROWTH IN INDUSTRY

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 86 pp 31-37

[Article by V. Svirchevskiy, deputy chief of the Division of Statistics of Management and Improvement of the Economic Mechanism of the USSR Central Statistical Administration: "An Analysis of Factors in the Growth of Wages of Industrial Workers"]

[Text] The Basic Directions for the Economic and Social Development of the USSR During 1986-1990 and the Period Up to the Year 2000 set the task of increasing the effectiveness of the wage system and coordinating more closely the amounts of remuneration for the workers and their labor contribution.

An increase in the effectiveness of the wage system is impossible without a qualitative analysis that makes it possible to reveal the negative tendencies that have accumulated in wages and to determine ways of eliminating them. The existing statistical reports make it possible to conduct the analysis and determine the majority of factors that affect the change in wages. For the analysis we singled out factors on which, with stable wage rates, the increase in the earnings of the workers depend to a decisive degree: changes in wage rates for work done by piecerate workers; increased fulfillment of output norms by piece-rate workers; changes in wage rates for the labor of time rate workers; and increased bonuses.

These factors affect the change in the wages of various groups of workers in different ways. For piece-rate workers the main factors are overfulfillment of the output norms and increased wage rates for the work that is done. For time-rate workers increments to wages are given when they rise to a higher wage rate category. For piece-rate workers the higher wage rate category has an insignificant effect on their wages--for increased payments for the difference between categories (these payments amount to 0.2-0.3 percent of the wage fund for workers and exert no practical influence on the dynamics of wages). For both piece-rate and time-rate workers increased earnings because of bonuses are given both as a result of increased earnings for which the bonuses are calculated and as a result of increasing the amount of the bonus itself.

Calculations were done for one of the branches of industry in which the wage conditions had not changed as compared to 1976. The year 1976 was selected

for comparison because by this year industry had completed the changeover to the new wage conditions. As initial data we used indicators contained on the forms of statistical reports for labor in industry (conventional figures):

Table 1

Indicators	Source of Information	1976	1980	1984
Average annual number of workers	Section I Ph. No 9*	3,994,860	4,349,648	4,442,856
Wage fund of workers, including calculations from the material incentive fund, millions of rubles	Section I Ph. No 9	8,169.1	9,834.0	11,141.2
Including:				
Calculated according to the direct, bonus and progressive piece-rate wages, millions of rubles	Section IV Ph. No 9	3,244.7	3,832.1	4,374.7
Time rate wages, millions of rubles	Section IV Ph. No 9	2,081.2	2,332.8	2,424.3
Calculated bonuses from wage fund, millions of rubles	Section IV Ph. No 9	1,285.0	1,647.2	1,969.8
Average monthly wages of workers, rubles	Section I Ph. No 9	170.4	188.4	209.0
Man-days worked by workers, millions of man-days	Section IV Ph. No 2-t	930.6	1,002.5	1,021.2
Man-hours worked by workers, millions of man-hours	Section IV Ph. No 2-5	7,310.8	7,861.4	8,052.5
Number of man-days of annual vacations, millions of man-days	Section IV Ph. No 2-5	70.4	76.0	81.3
Average percentage of fulfillment of output norms by piece-rate workers	Section I Ph. No. 4-t (industry) Calculated according to	118.6	122.1	126.3
Proportion of piece-rate workers in overall number of workers, percentage	Section II Ph. No. 4-t (industry)	50.6	50.9	52.3
The same for time-rate workers, percentage	"	49.4	49.1	47.7

* Beginning with the report for 1985--Ph. No. 2-t (annual)

Let us consider the methods for calculating the influence of the increased wage rates for work done by piece-rate workers on the increase in the wage fund for workers.

The wage rates that are in effect were constructed on the basis of the principle that the greater the complexity of the work that is performed (and, consequently, the higher the wage rate category of the worker who performs the work), the higher the pay for it, that is, the higher the rate of one norm-or man-hour. This was also the basis for the construction of a diagram for calculating the influence of the increased wage rates on the increase in the wage fund for the workers. The complexity consists in determining the average cost of 1 norm-hour since the data for the norm-hours worked by piece-rate workers are not contained in the statistical reports. They are calculated on the basis of the man-hours worked by all workers, the proportion of piece-rate workers in the overall number of workers and the average percentage of fulfillment of the output norms.

Calculations show that if the wage rates are retained at the 1976 level the wages for piece rate workers would be calculated in 1980 at 218.4 million rubles less and in 1984--440.4 million rubles less. The system for calculation is presented below:

Table 2

Line No.	Indicators	1976	1980	1984
1	Millions of man-hours worked by workers	7,310.8	7,861.4	8,052.5
2	Proportion of piece-rate workers, %	50.6	50.9	52.3
3	Millions of man-hours worked by piece-rate workers (Line 2 x Line 1/100)	3,699.3	4,001.4	4,211.5
4	Average percentage of fulfillment of output norms by piece-rate workers	118.6	122.1	126.3
5	Millions of norm-hours worked by piece-rate workers (Line 3 x Line 4/100)	4,387.3	4,885.8	5,319.1
6	Calculated according to direct, bonus and progressive piece rate, millions of rubles	3,244.7	3,832.0	4,374.7
7	Average cost of one norm-hour, kopecks (Line 6/Line 5 x 100)	73.96	78.43	82.24
8	Increased cost of 1 norm-hour as compared to 1976, kopecks		4.47	8.28
9	Additional calculated as a result of increased cost of 1 norm-hour, millions of rubles (Line 5 x Line 8/100)		218.4	440.4

The earnings of piece-rate workers also increase when there is an increase in the fulfillment of output norms. And here two factors have an influence: the direct increase in the number of norm-hours that are paid for with a simultaneous increase in the cost of 1 norm-hour. The influence of the increased cost of a norm-hour on the increase in the wage fund of workers was calculated above. Therefore the task is to determine the increase in the wage fund of workers as a result of increased fulfillment of the output norms without taking into account the increased cost of the norm-hour itself:

Table 2 (cont'd)

Line No.	Indicators	1980	1984
10	Millions of norm-hours that would have been worked if fulfillment of output norms remained at 1976 level (Line 3 x 118.6/100)	4,745.7	4,994.8
11	Difference between actual norm-hours worked and calculated, millions	140.1	324.3
12	Additional calculated for them, not counting increased cost of norm-hour, millions of rubles (Line 11 x 73.96 kopecks/100)	103.6	239.9

With the increase in the wage rates the increase in the wage fund for workers as a result of these two factors amounted to 322 million rubles in 1980 (218.4 + 103.6) and 680.3 million rubles in 1984.

The increase in the wages of time-rate workers is related primarily to the increase in wage rates: when they reach a new and higher wage rate category for each hour that is worked more wages are calculated. The complexity of the calculation consists in determining the average cost of 1 man-hour worked by time-rate workers. It is calculated on the basis of the man-hours worked by all workers and the proportion of time-rate workers in the overall number of workers as well as the monetary sums of time-rate payment (the calculation is given below):

Table 2 (cont'd)

Line No.	Indicators	1976	1980	1984
13	Proportion of time-rate workers, %	49.4	49.1	47.7
14	Millions of man-hours worked by time-rate workers (Line 1 x Line 13/100)	3,611.5	3,859.9	3,841.0
15	Time-rate payment, millions of rubles	2,081.2	2,332.8	3,841.0
16	Average cost of 1 man-hour worked by time-rate workers, kopecks (Line 15/Line 14 x 100)	57.6	60.4	63.1
17	Increase as compared to 1976, kopecks		2.8	5.5
18	Additional calculated as a result of increased cost of 1 man-hour, millions of rubles (Line 17 x Line 14/100)		108.1	211.3

Thus the increased wage rates of time-rate workers brought about an increase in the wages of workers in 1980 of 108.1 million rubles and in 1984--211.3 million rubles.

With the bonus system the wages for the workers are calculated for the actual amount of time worked in percentages of the wage according to piece rates or wage rates (salaries), that is, an increase in wages involved in an increase in bonuses. Additionally, an increase in the bonus sums depends also on the change in the amount (percentage) of the bonus itself. On the basis of this a calculation system was constructed where the complexity consists in separating the influence of these two factors.

When calculating the influence of the increase in the amount (percentage) of deduction of bonuses, the prerequisite was the following: a change in the established percentage of bonus is accompanied by a change in the amount of the bonuses per 1 ruble earned according to piece rates or wage rates. The system for the calculation is presented below:

Table 2 (cont'd)

Line No.	Indicators	1976	1980	1984
19	Bonuses calculated from wage fund, millions of rubles	1,285.0	1,647.2	1,969.8
20	Calculated according to piece-rate and time-rate system of wages, millions of rubles	5,325.9	6,164.9	6,799.0
21	Bonuses calculated per 1 ruble of wage fund, kopecks	24.1	26.7	29.0
22	Increase as compared to 1976, kopecks		2.6	4.9
23	Additional calculated as a result of the increased amount (percentage) of the bonus, millions of rubles (Line 22 x Line 20/100)		160.3	333.2

This means that solely as a result of increasing the amount of deduction of bonuses in 1980 by 10.8 percent (26.7 kopecks: 24.1 kopecks), and in 1984 by 20.3 percent the wage fund of the workers increased by 106.3 and 333.2 million rubles, respectively.

But as a result of the increase in the wage rates for the work and the wage rate categories for workers as well as the increase in the fulfillment of output norms, the wages themselves from which the bonus is calculated increased for piece-rate workers. Having calculated the amount by which the wage fund increases as compared to 1976 as a result of the aforementioned factors, one can determine their influence on the increase in the amount of the bonuses:

Table 2 (cont'd)

Line No.	Indicators	1980	1984
24	Increase in wage fund for workers as a result of increased wage rates for work and wage rate categories of workers, increase in the fulfillment of output norms, millions of rubles (Line 9 + Line 12 + Line 18)	430.1	891.6
25	Additional calculated bonuses not including increase in bonus itself (that is, from the calculation of the bonus at the 1976 level--24.1 kopecks per 1 ruble of wages), millions of rubles (Line 24 x 24.1 kopecks/100)	103.7	214.9

Thus the increase in earnings from which the bonus is calculated accompanied by an increase in the amount (percentage) of deduction of the bonus itself brought about an increase in the wage front for workers in 1980 as compared to 1976 of 264.0 million rubles (160.3 + 103.7) and in 1984--548.1 million rubles).

The increase in the workers' wage fund as a result of the aforementioned factors automatically also entailed an increase in the paid vacations for this category of workers. The system for calculation is presented below:

Table 2 (cont'd)

Line No.	Indicators	1980	1984
26	Additional calculated wage fund for workers, million of rubles (Line 23 + Line 24 + Line 25)	694.1	1,439.7
27	Millions of man-days worked by workers	1,002.5	1,021.2
28	Additional calculated per 1 man-day, rubles	0.7	1.4
29	Number of days of annual vacations for workers, millions of man-days	76.0	81.3
30	Additional calculated for days of vacation, millions of rubles (Line 28 x Line 29)	53.3	113.8

Up to this point the increase in the wage fund for workers was the final result of all the calculations. In order to nullify the increase of this fund as a result of the increased number of workers, let us determine it per 1 average registered worker per month, that is, let us determine the increase in the average monthly wages:

Table 3

Indicators	Increase as Compared to 1976: 1980 Wage Fund, millions of rubles	1980 Average Monthly Wages, rubles	1984 Wage Fund, millions of rubles	1984 Average Monthly Wages, rubles
Increased cost of norm-hour worked by piece-rate workers (increased wage rates for work), Line 9	218.4	4.2	440.4	8.3
Increased fulfillment of output norms by piece-rate workers (increased revision of norms), Line 12	103.6	2.0	239.9	4.5
Increased wage rates for time-rate workers (increased wage rates for workers), Line 18	108.1	2.1	311.3	4.0
Increased bonuses as a result of increased wages from which they are calculated (increased bonuses), Line 25	103.7	2.0	214.9	4.0
Increased amount (percentage) of deduction of bonuses (increase in amount of bonuses), Line 23	160.3	3.1	333.2	6.2
Increased paid vacations as a result of increased wages from aforementioned factors (increased paid vacations), Line 30	53.3	1.0	113.8	2.0
Total	747.4	14.4	1,553.5	29.0

Now one can calculate the influence of these factors on the overall increase in the average monthly earnings of workers, which amounted in 1980 to 18.0 rubles as compared to 1976 and in 1984--to 38.6 rubles (see initial data).

The remaining increase in the wages of workers comes from factors that are not directly related to the organization and norm setting for labor and industrial enterprises (increased payments according to coefficients, increments for work in the North, remunerations for length of service, bonuses under special systems of awarding bonuses and so forth).

Thus a considerable influence is exerted on the increase in the wages of workers (and industrial production personnel as a whole) by such factors as the complexity of the work that is done, the increased skills of the workers,

the precision of the determination of the necessary labor expenditures for the output of products and so forth, which largely depend on evaluations by workers engage in the organization and norm setting for labor, which can sometimes be subjective.

Table 4

	1980 in Percentage of 1976	1984 in Percentage of 1976
Increase in average monthly earnings of one average registered worker, total	100.0	100.0
Including as a result of increase:		
Of wage rates for work	23.3	21.5
Revision of norms	11.1	11.6
Wage rates for categories of workers	11.7	10.4
Calculations of bonuses from wage fund, total	28.3	26.5
Of this, as a result of:		
Increased bonuses	11.1	10.4
Increased amount of bonuses	17.2	16.1
Paid vacations	5.6	5.4
Total	80.0	75.4

The Unified Wage Rate and Skills Reference (YeTKS), on the basis of which the wage rates are set for work and for categories of workers, the systematic revision of labor norms as production is mastered and organizational and technical measures and new technical equipment are introduced, and the application of interbranch and branch technically substantiated normatives--such is the normative base with which the quantity and quality of labor is evaluated. But such an evaluation of the labor of workers is merely formal in many cases. The subjectivity of the evaluation and also the degree of skills of the workers employed in the organization and norm setting for labor, in a number of cases, lead to mistakes in determining the quality and quantity of labor expenditures, and often unjustifiable increases in wage rates for work and establishment of unjustifiably high output norms are done deliberately.

Thus the following factors affect the growth of the wages of workers:

1) Objective ones--increased complexity of the products that are produced and the work that is performed; increased skills of the workers and the corresponding increase in their wage rate categories;

2) Subjective ones--increased evaluations of the quantity and quality of the labor of workers; inadequate skills of workers engaged in the organization and norm setting for labor.

The main shortcoming in the organization of labor and wages is considered to be the poor quality of norm setting for labor. But, as the results of an

analysis show, other wages of increasing wages exert a much greater influence on them.

The proposed methods utilize indicators only of existing statistical reports and it is not necessary to gather additional information for the analysis. At the same time, the methods of a number of calculations require clarification. On the basis of data concerning the proportion of piece-rate and time-rate workers in the overall number of workers it is possible to calculate the number of man-days and man-hours worked by both groups; on the basis of data concerning the average percentage of fulfillment of the output norms by piece-rate workers it is possible to calculate the number of norm-hours worked by them. Additionally, both the proportion and the average percentage of fulfillment of output norms were determined according to data from the form for statistical reports No 4-t (ind.) "Report on Fulfillment of Output Norms and Condition of Norm Setting for Labor" for October of the Corresponding Year, and these data are used for calculations regarding the average annual (or for the year as a whole) indicators. But a number of aspects show the admissibility of this kind of report.

First, such a methodology is used in calculations for all of the analyzed periods, and the basis of the calculation is indicators of increase and not absolute indicators.

Second, since the data concerning the amount of time worked by all workers, the number of these workers and their wages are taken directly from statistical reports, the deviations of the calculated indicators from the actual situation can lead only to a certain redistribution within related factors which operate for various groups of workers, without distorting the actual tendencies that exist.

Third, the ratio between piece-rate and time-rate workers (one of the main calculated indicators) not only within the year, but even within the long-range dynamics does not change significantly, which makes it possible to distribute the data from the report for October over the year as a whole. Thus according to the data for October of the corresponding year, the proportion of piece-rate workers in the overall number of workers in industry as a whole changed as follows: 1976--53.3 percent, 1978--52.9 percent, 1980--52.7 percent, 1982--52.7 percent, 1984--52.9 percent.

On the basis of what has been presented above one can say that the calculated data applied in the analysis are sufficiently representative and that those allowances which are natural with this kind of report produce deviations which have practically no effect on the precision of the results of the analysis.

The utilization of data from only the existing statistical reports makes it possible to conduct the analysis with the help of computer equipment on the basis of indicators of existing complexes for electronic processing of data.

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FINANCIAL EXPERT ON IMPROVEMENTS IN WAGE FUND PLANNING

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[Article by K. A. Strelkova, chief expert of the USSR Ministry of Finance's Main Administration for Credit, Money Circulation and Wage Monitoring: "Improving Wage Fund Formation and Use"]

[Text] The results of the economic experiment have enabled us to generalize the experience accumulated by production associations (enterprises) in shaping and using the wage fund. We should first of all recognize the necessity of interlinking growth in output, labor productivity, profit and other economic indicators with growth in wages. It is just such an approach to wages which has been outlined in the drafts of the new revision of the CPSU Program and "Basic Directions of USSR Social and Economic Development in 1986-1990 and Up To 2000" which were approved by the October (1985) CPSU Central Committee Plenum, which noted the necessity of improving the effectiveness of the wage system, of closely linking the amount of compensation paid to workers to their labor contribution. Therefore, the end results of labor and the expenditures on labor must be compared when using the positive experience accumulated in other branches of the national economy.

Analysis of the materials from studies of the experiment has shown that material incentives and wage fund development conditions have been set for some ministries which would permit wage growth rates to exceed end result growth rates. This applies foremost to the material incentives fund growth.

In the Ministry of Heavy and Transport Machinebuilding (Mintyazhmash) and Ministry of Electrical Equipment Industry (Minelektrotekhprom), which were transferred to the new management conditions, material incentives funds increased from 17.8 and 4.3 percent in 1983, respectively, to 27.6 and 31.2 percent in 1984. But profit, the source of the funds, increased to 19.5 percent in 1984 in the Mintyazhmach and to 18.9 percent in the Minelektrotekhprom. For the Ministry of Food Industry (Minpishcheprom), payments from the material incentives fund were 13.9 percent higher in 1984 than in 1983, but industrial output rose by 4.2 percent, labor productivity by 3.8 percent and profit by 6.4 percent. For the Ministry of Light Industry (Minlegprom), payments from the material incentives fund increased 11.7 percent during this period, commodity output growth reached 1.3 percent, labor productivity growth was 2.7 percent and profit growth was 3.8 percent.

The situation is similar in the associations and enterprises. At the Spalis pilot-experimental association of the Lithuanian Minmestprom (Ministry of Local Industry), a material incentives fund totalling 285,000 rubles (a 35.7 percent increase) was created while commodity output increased 5.9 percent and profit increased 14.4 percent. At the Progress knitwear production association in Minsk (Belorussian SSR Minlegprom), profit increased 0.2 percent, commodity output increased 1.3 percent, and the material incentives fund increased 16.5 percent.

As is evident from the above data, the creation of large bonus funds and increasing payments from them has not led to the necessary improvement in enterprise activity. The material incentives system has turned out to have little effect on increasing production effectiveness. This is borne out by the fact that procedures for forming incentives funds have not always been linked to the methods for distributing and using them. This situation is to be explained first of all by the fact that the actual material incentives fund has been substantially increased through incentive surcharges to wholesale prices for new output and products with the state Badge of Quality.

At the Baranovichi Cotton Production Association of the Belorussian SSR Minlegprom, surcharges for N-indexed products were 800,000 rubles in 1984, or 11.8 percent more than in 1983; they reached 216,000 rubles in the first quarter of 1985, which is 23.3 percent more than in the same period in 1984. At the Trekhgornaya Manufaktura Cotton Combine imeni F. E. Dzerzhinskiy, the material incentives fund for basic economic activity results was 487,500 rubles in 1983, but deductions to the material incentives fund for awarding bonuses for N-indexed items was 2,128,000 rubles. The additional 15-percent deductions from planned funds have also affected the considerable increase in material incentives funds. At the Tallin Electrical Equipment Plant imeni M. I. Kalin (Minelektrotekhprom), for example, they comprised 65.2 percent of all above-plan deductions. The additional deductions have often been made at the expense of reducing deductions of profit to the budget (Vyrupribor Production Association (USSR Minpribor [Ministry of Instrument Making, Automation Equipment and Control Systems]) in Vyru, Vyyt Agricultural Machinery Plant (USSR Minselkhozmash [Ministry of Tractor and Agricultural Machinebuilding]) in Tartu, and others).

Moreover, the increased material incentives funds have been associated with shortcomings in planning and recording performance of contractual delivery obligations, artificially inflating that performance. Thus, adjusting delivery schedules by decreasing first-quarter plans and increasing fourth-quarter delivery plans correspondingly enables enterprises to report delivery plan fulfillment for the year and increase deductions to the material incentives funds by 15 percent.

At a number of enterprises, cases have been discovered of contracts with customers not covering all job-authorization scheduled output. The Kran Association (Tula Oblast) concluded contracts for 15 million rubles in first-quarter 1984, or only 60 percent of its planned 25.1 million rubles of production output. The understated deliveries were made, helping the association increase deductions to material incentives funds to 15 percent. The USSR Minlegprom's established procedure for evaluating output marketing plan fulfillment on the basis of contracts concluded for a so-called consolidated group assortment has not ensured full production and delivery of the required assortment of goods.

Given 100-percent delivery plan fulfillment, the Mogilevsk Silk Fabrics Production Association of the Belorussian Minlegprom paid fines of 490,000 rubles in 1984 and 9,000 rubles in first-quarter 1985 in connection with failures to deliver output in the proper assortment, while at the same time having an additional 142,000 rubles (15 percent) transferred to its material incentives fund. According to 1984 results, the total unexpended wage fund savings transferred to material incentives funds reached significant levels, for example, 12.2 million rubles for the Mintyazhmash, 34.6 million rubles for the Minelektrotekhprom, 18.4 million rubles for the Ukrainian SSR Minpishcheprom, 8.1 million rubles for the Belorussian SSR Minlegprom and one million rubles for the Lithuanian SSR Minmestprom. Incentives fund growth not linked to improved end results bespeaks a necessity to improve the procedure for forming such funds.

The wage fund is formed based on normatives of increment in this fund per percentage point of increment in overall production volume, based on wage normatives per rubles of output produced and per unit of output in physical terms. However, all the industrial ministries are currently using only the increment form of normative planning, which has a number of shortcomings as compared with current procedures. Thus, the procedure of determining the wage fund based on increment normatives relative to a base fund makes it possible to, in any event, obtain a wage fund at at least the previous year's level.

The right granted associations (enterprises) to distribute themselves, on a quarterly basis, the preponderance of the wage fund (the so-called base wage fund) allows inflated relationships between labor productivity and average wage increment over rates of labor productivity increment to be established in the first quarters of the year. Thus, in the Bashkir ASSR Minmestprom in 1984, the labor productivity growth planned for the Ufa Paint and Varnish Plant in the second quarter was 108.4 percent and average wage growth planned was 110.5 percent; at the Sputnik association, the first-quarter figures were 98.1 and 104.5 percent, respectively; the figures for the Ufa Graded Rolled Metals Products Plant were 98 and 105.9 percent in the third quarter and 96.9 and 104.2 percent in the fourth quarter.

Although oriented towards production volume growth, the increment principle is also oriented towards lowering the reporting base. Moreover, this planning procedure must not be used for sectors and shops in which the wage fund is determined using the entire output volume. A mechanical carryover of the total wages actually deducted in the preceding planning year and use of this total as a base wage fund does not take into account changes in the products mix and labor intensiveness of the production. For example, while the actual production mix changed at the Muromsk Diesel Locomotive Manufacturing Plant imeni F. E. Dzerzhinskiy and at a whole series of associations (enterprises) of the USSR Minlegprom checked by financial agencies, the base wage fund was not adjusted.

Moreover, the base wage fund includes the total bonuses paid workers for overfulfilling production indicators in terms of volume. In this connection, enterprises having a larger wage fund in the base year, especially when due to high bonuses, will also have a higher planned wage fund the following year as compared with associations which operated more poorly the previous year (although both may operate equally well the following year). It would seem to be appropriate to exclude all such payments from the base wage fund.

The procedure for retaining the wage fund for the current year does not take into account any reduction in the number of personnel after the introduction of new equipment or technology or following labor organization improvement. Thus, as a result of planning from "achieved level," the reduction in number of workers (16 people) was not recorded in the first-quarter 1985 plan for the metal household goods plant of the Kiev city local industry administration, leading to overstatement of the base wage fund by 11,800 rubles.

When solving this problem, we should proceed from mandatory annual reduction in the base wage fund by the amount obtained due to any reduction in the number of personnel because of organizational-technical measures. Posing the problem this way forces enterprises to take the steps necessary to accelerate scientific-technical progress. It is appropriate to eliminate from the actual wage fund for the base year the wages of above-plan workers. The limits on numbers of workers are being exceeded in the associations (enterprises) of a number of ministries.

Retaining the base wage fund when production plan fulfillment is below the level of the corresponding period in the previous year is unjustified. According to USSR Gosbank data, given actual normative net product growth rates of 97.9 and 99.6 percent in first- and second-quarter 1984 at the "Elektromashina" plant in Prokopyev (Minelektrotekhprom), the wage funds for industrial-production personnel were issued within the base wage fund limits set for these quarters without reduction linked to the reduction in production volume as compared with the corresponding periods in the preceding year. And the base wage fund for these quarters was inflated by 267,700 rubles, or 3.7 percent. As a result, an undeserved wage fund savings totalling 345,500 rubles, or 4.6 percent of the planned fund, was created at the plant.

Such a situation permits an association (enterprise) to strengthen its own wage fund without additional labor expenditures and to spend these funds without linking them to end results. Under the procedures in effect in industry, if this is done, the planned wage fund is to be reduced based on output normatives by institutions of the USSR Gosbank, with consideration of branch features. It is appropriate to retain this procedure for associations (enterprises) operating under the new management conditions.

The Methods Instructions on Procedures for Normative Wage Fund Generation provide for different approaches to the shaping of these funds. Thus, a number of ministries increase the base wage fund by the total additional unused relative wage savings over the preceding period, with a one-time transfer of that savings to the material incentives fund. Today, this procedure is still being used in the Methods Instructions of the RSFSR Minelektrotekhprom and Minbyt [Ministry of Consumer Goods], creating prerequisites for noneconomical expenditure of wage funds. Under the current procedures, there are no such restrictions on transferring unused wage fund savings. There have been instances in which the savings has been 80-90 percent of the planned material incentives fund (Kirov's Rosmolprom Association, the Primorsk Meat Industry Association, and so on).

In this regard, the wage fund savings not used by the end of the year will in any event be linked to the base wage fund, although this is not justified economically. Such a preferential procedure not only fails to orient enterprises

towards using wage funds economically, it also creates an additional possibility for spending "non-wage" funds even if the associations (enterprises) have not increased production volume and have not increased labor productivity. It is apparently necessary to change this procedure.

When a wage fund savings is obtained, a careful examination of the way it is formed is required. When linking unused savings in this fund to the base wage fund, preference should be given to what is formed when operating with fewer personnel, inasmuch as the creation of a savings must be an indicator of social production intensification and characterize a reduction in wage expenditures to produce a unit of output on the basis of labor productivity growth. Wage fund savings must be an economic result of the production activity of the collective.

Many associations (enterprises) have not reduced the actual calculated wage by the amount of nonproductive expenditures on wages when calculating the base wage fund. Whereas the Methods Instructions for a number of ministries transferred to the new management conditions since 1985 anticipate a reduction in base wage of 50 percent of the total amount of nonproductive payments, there are no such instructions for the Mintyazhmash, Minelektrotekhprom and Minmestprom in the Lithuanian SSR, the union republic Minlegproms, or the RSFSR Minbyt, and the total such payments are significant.

Thus, these payments totalled 4.4 million rubles at enterprises of the Mintyazhmash in 1984, and, among the enterprises checked by financial agencies in first-quarter 1985 alone, they had reached 855,000 rubles. Nonproductive expenditures at the "Engine of the Revolution" plant in Gorkiy had increased by 55,000 rubles in first-quarter 1985 as against 1984 and totalled 217,600 rubles. And, although several of the Methods Instructions anticipated a reduction in the base wage fund by the total nonproductive expenditures, their composition was undetermined, providing an opportunity for associations (enterprises) to determine at their own discretion the total funds subject to exclusion from the base wage fund (Minkhimmash, Minstankoprom [Ministry of Machine Tool and Tool Building Industry] and Mintyazhmash).

In view of the necessity of a unified approach to shaping the size of the base wage fund, it is appropriate to work out for the associations (enterprises) using the increment principle Standard Regulations on Normative Wage Fund Generation. When making a comparative analysis of the advantages and shortcomings of the different methods of wage fund planning, particular attention should be paid to shaping wage funds using expenditure normative per unit of output volume, taking into account the reduction in wage expenditures per unit of output with labor productivity factored in.

The new management conditions have substantially broadened opportunities for using wage funds by establishing supplemental payments and surcharges to stimulate growth in the occupational skill of workers and combining occupations, but they are not always used efficiently. Experience has shown that substantial violations of the principle of differentiating wages have been permitted in the use of surcharges when they have been set not for attaining specific results, but to serve as a mechanical wage supplement.

There have been instances in which surcharges for high professional skill have been established for workers who have not directly participated in improving the technical-economic indicators of enterprise operation, such as secretary-typists, heads of clerical staffs, archives and warehouse chiefs, personnel inspectors and chief clerks, rather than for foremen, designers and technologists. In this regard, the supplements for administrative and managerial personnel have been considerably higher than those for specialists in basic production.

Different ministries have different approaches to setting supplements and surcharges. Whereas the Belorussian SSR Minlegprom and Ukrainian SSR Minpishcheprom have established more supplements and surcharges for workers (66 and 58 percent), the Lithuanian SSR Mintyazhmash, Minelektrotekhprom and Minmestprom have set higher rates for engineering-technical workers and employees (77.65 and 57 percent). At the Muromsk Diesel Locomotive Manufacturing Plant, for example, the proportion of workers receiving supplements is 1.4 percent of all industrial-production personnel, but the proportion of engineering-technical workers is 20.8 percent and the proportion of employees is nine percent; at the Zhuvedra production association of the Lithuanian SSR's Minmemtprom, the figures are 2.7, 67.2 and 76.5 percent, respectively, and at the Rigas Aditays knitwear factory of the Latvian SSR's Minlegprom the figures are 8.6 percent of the workers and 33 percent of the engineering-technical workers and employees. In our view, supplements and surcharges to salaries for wage fund savings should correspond to personnel categories. For example, for engineering-technical workers and employees, they should be set for wage fund savings only by this category of workers, and not for overall savings in this fund, including that accounted for by non-manufacturing personnel.

The materials of checks run by financial agencies have shown that supplements and surcharges at enterprises of individual ministries have been set in the absence of anny wage fund savings, sometimes with wage fund overexpenditures. The South Urals Machinebuilding Plant of the Mintyazhmash permitted a wage fund overexpenditure of 124,100 rubles, but paid out 160,800 rubles in supplements and surcharges. The situation was similar at the Yasinovatskiy Machinebuilding Plant (Ukrainian SSR), where 126,100 rubles in supplements and surcharges was paid out, given a wage fund overexpenditure of 55,300 rubles.

In a number of instances, the supplements and surcharges were established in the face of lowered plan fulfillment in terms of basic technical-economic indicators. The Aleksandriyskiy Lift-Transport Equipment Plant imeni 60th Anniversary of the Great October Socialist Revolution failed to meet the plan in 1984 in terms of basic technical-economic indicators, but the supplements and surcharges to enterprise workers were not canceled. In fact, they were increased nearly three-fold as compared with 1983 (a supplement of 100 rubles, or 43.5 percent of his salary, was established for the chief engineer) and were 102,700 rubles. As a result, given labor productivity reduction of 7.2 percent, the average worker wage rose four percent. Many engineering-technical workers of the Spalis association of the Minmestprom were granted surcharges for "starting up the electroplating sector ahead of schedule," although its start-up had been planned for third-quarter 1984 and had still not occurred in first-quarter 1985. Still, the surcharges for this measure were neither reduced nor canceled.

The collectives of a number of enterprises are working more actively along this line. Given a reduction in plan, assignment and output norm fulfillment and a reduction in product quality and violations of labor discipline, the Rigas Aditays knitwear factory deprived its workers of all surcharges. The foreman of a dyeing printing department was deprived of the surcharge established for his position due to a reduction in product quality and to poor labor discipline. A sewing machine operator in the garment department was deprived of her surcharge for exceeding the rejects limit three months running. A technologist in the tying shop was deprived of his surcharge. In order to intensify wage differentiation, it is important not only to set surcharges, but also to rescind them when necessary. The retention of surcharges when work indicators drop causes great material and moral harm.

With a view towards making wage and incentives funds more dependent on labor productivity level and other qualitative indicators of association (enterprise) activity with consideration of the experience accumulated, the "Standard Regulations on Generating and Using Wage and Material Incentives Funds at Production Associations (Enterprises) in the 12th Five-Year Plan" should also take the shortcomings noted into account.

When working out documents based on these Standard Regulations, the ministries need first to work out, for example, provisions on procedures for establishing supplements and surcharges with consideration of the specifics of each branch and, in particular, only for those workers whose job performance is rated above-average, and well as establishing specific time limits (quarter, year) for these surcharges. In the absence of work violations, the surcharges should be retained once that time limit is up, and when labor activeness has decreased or when systematic violations have been permitted, they should be reduced or rescinded. Shortcomings in shaping and using the wage fund have also affected the relationship between labor productivity increment and average wage increment, as is evident from the table.

Increment in Average Wage Per One-Percent Increment in Labor Productivity (January-June, 1984 and 1985)

	1984	1985
seven machinebuilding ministries including:	0.51	0.53
Minelektrotekhprom	0.54	0.61
Minkhimmash	0.55	0.56
Minstankoprom	0.39	0.52
Minselkhozmash	0.43	0.44
six enterprises of the USSR Ministry of Ferrous Metallurgy	0.48	1.50
six union-republic ministries of the USSR Minpishcheprom including:	0.54	1.15
Ukrainian SSR Minpishcheprom	0.53	2.30
Belorussian SSR Minpishcheprom	0.52	0.68
Moldavian SSR Minpishcheprom	0.43	0.93
Latvian SSR Minpishcheprom	1.57	1.63

	1984	1985
Belorussian SSR Minmyasomolprom [Ministry of Meat and Dairy Industry]	0.49	0.70
RSFSR Minrybkhoz [Ministry of Fish Industry]	0.63	0.66

The indicator of the relationship between labor productivity increment and average wage increment (using the current procedure, it is a monitoring indicator for expenditures from wage and material incentives funds) requires further changes, inasmuch as it does not reflect many types of wages. Thus, the average wage grows as the proportion of higher-quality goods increases and as more material resources are saved, and so on, but these factors do not influence the labor productivity indicator, so generalized indicators should be introduced.

The CPSU Central Committee and USSR Council of Ministers Decree No 669, of 12 July 1985, "On Widely Disseminating New Methods of Management and Strengthening Their Influence on Accelerating Scientific-Technical Progress" determined the directions of further improvement in the economic mechanism. Monitoring of the efficient use of wage funds is being strengthened by the establishment of normative ratios between average wage increment and labor productivity increment for the ministries, production associations and enterprises operating under the new management conditions, as anticipated.

The transfer of many branches to the new management conditions will enable us to work out in practice new methods of management which take into account the features of various branches. Questions of wage fund generation and use require further refinement. The effectiveness of all production links depends on a correct determination of wage funds as a function of the contributions enterprise collectives make to end results.

11052
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LABOR

LABOR PRODUCTIVITY IN AGRICULTURAL INTENSIFICATION VIEWED

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 86 pp 8-12

[Article by L. Vashchukov, chief of the Administration for Statistics of the Agroindustrial Complex of the USSR Central Statistical Administration: "Agricultural Personnel--The Main Factor in Intensification of Agricultural Production"]

[Text] One of the most important directions for the party policy in the agrarian sector of the economy is acceleration of scientific and technical progress and a changeover to the path of intensive development of all production units of the agroindustrial complex. There is to be consistent introduction of scientifically substantiated systems of farming and animal husbandry, extensive mechanization and automation of technological processes for the production, storage and processing of agricultural products, and dissemination of advanced experience in management, progressive forms of organization and stimulation of labor and, above all, the collective contract and cost accounting [khozraschet].

In recent years the material and technical base of the main unit of the agroindustrial complex has become considerably stronger, the qualitative composition of the machine and tractor fleet has improved, capital availability for labor and the level of mechanization of labor-intensive work has increased, and, on the basis of this, labor productivity has increased significantly. Just during the past 10 years fixed production capital for agricultural purposes on public farms has increased 2.1-fold and by the end of 1984 it amounted to almost 300 billion rubles. At the present time in agriculture there are 2.8 million tractors, more than 16 million electric engines, 822,000 grain-harvesting combines, 63,000 cotton-harvesting combines and 55,000 sugar beet harvesting machines as well as other kinds of technical equipment; large animal husbandry complexes, poultry farms and hothouse combines have been constructed.

The capital availability for agricultural workers has increased 2.2-fold during the past 10 years, which makes it possible to increase the volumes of production of agricultural products.

The existence of a powerful production potential in agriculture places special demands on workers of this branch. The large capital investments allotted for

agriculture must be used with increased effectiveness. This requirement becomes especially significant since in recent years output-capital ratio has been decreasing in agriculture.

This situation requires in-depth study so that in the near future in agriculture measures will be taken for more complete utilization of the existing potential for purposes of intensive development of this branch of the national economy.

A good deal is being done in the country to change agriculture over to the path of intensive development. But at the present time, as General Secretary of the CPSU Central Committee M. S. Gorbachev emphasized in his speech at the April (1985) Plenum of the CPSU Central Committee, in solving the problems of intensifying production, accelerating scientific and technical progress and increasing the growth rates of production it is necessary first and foremost "to activate the human factor." This, of course, pertains to agriculture as well. For purposes of unconditional realization of the transformations that have been earmarked for agricultural production measures are being taken to further improve the qualitative composition of management personnel and specialists and to increase their competence in questions of intensification of production and its close link with science.

Successful solutions to the problems facing the agroindustrial complex as a whole and its main unit, agriculture, depend on the effectiveness of the work of agricultural personnel.

The scope and complexity of these problems requires that each manager and specialist be ready to act energetically, with initiative, with a maximum return, with a deep understanding of the forthcoming tasks, and with complete responsibility.

It was emphasized at the conference of the CPSU Central Committee on questions of accelerating scientific and technical progress that our personnel must understand the vital necessity for the reorientation of each enterprise, each branch and the entire national economy toward the path of intensive development.

What is the situation with rural personnel today?

At the present time 20 percent of all people employed in the national economy are working in agriculture (including private subsidiary farms); each rural worker feeds 10 people in addition to himself. In 1984 there were 22.9 million people working in public agriculture. Each sovkhoz has an average of 532 people and each kolkhoz--490 people.

The increased technical support for agricultural production and the greater capital and energy availability for labor have provided for a reduction of the number of people working in this branch. During the past 10 years alone about 1 million people have been released from public agriculture in the country as a whole, and their labor is being used in other branches of the national economy. But it should be noted that during the past 2 years, as a result of measures that have been taken for retaining personnel in rural areas, the

process of reduction of the number of workers in agriculture has come to a halt, and in individual republics (Uzbek, Kirghiz, Tajik and Azerbaijan) their numbers have increased.

At the present time the kolkhozes and sovkhozes are in the charge of experienced, competent and professionally trained people who are capable of organizing modern production.

There are 1.9 million specialists with higher and secondary specialized education working in agriculture; there are 35 specialists with diplomas on each farm; 90 percent of the chairman of kolkhozes and 99 percent of the directors of sovkhozes have completed higher or secondary specialized education; the positions of agronomists, zootechnicians, veterinary workers, and engineers are held mainly by specialists with diplomas. Each farm has an average of three agronomists, three zootechnicians, four veterinary workers, seven engineers and technicians in all specialties, and two economists.

The higher level of technical support for the farms has led to significant qualitative changes in the structure of the workers--an increase in the proportion of machine operators. In 1985 on the kolkhozes, sovkhozes and interfarm enterprises there were 4.6 million people working as tractor mechanics, tractor drivers, combine operators, and truck drivers--21 percent of the overall number of workers in agriculture. Today each farm has an average of 87 machine operators as compared to 83 in 1975 (a considerable proportion of them are machine operators of Classes I and II, that is, tractor mechanics of a broad profile).

The overall number of people employed on the kolkhozes and sovkhozes, 5.7 million (23 percent) are animal husbandry workers. Because of the increased mechanization of production processes, new occupations have also appeared in this branch--milking machine operators and operators who handle cattle, hogs and poultry.

The provision of personnel for such branches as crop growing and animal husbandry, their intelligence, competence, high skills and rich experience are a major factor increasing the number of farms with high indicators in the country. Thus the number of kolkhozes and sovkhozes with productivity of grain crops of more than 25 quintals per hectare in 1984 had increased by 91 percent as compared to 1970, sugar beets (commercial) of more than 350 quintals--by 28 percent, cotton of more than 30 quintals--by 50 percent, vegetables of more than 300 quintals--by 63 percent, average milk yield per cow of more than 3,000 kilograms--by 65 percent, and so forth.

But there are still many farms which are obtaining small crops, milk yields and weight gains. And here, of course, the specialists are largely to blame. It is difficult to understand, for example, an agronomists who does not have enough seeds of one kind of crop or another by the beginning of planting time or has a large quantity of seeds that are in poor condition. For example, in 1981-1984 by 1 April on the kolkhozes and sovkhozes 2 percent of the seeds of grain and post crops were in poor condition (with respect to purity). It should be noted that there are many farms on which the specialists are not valued, their professional knowledge is not taken into account, and their

rights are diminished. This is one of the main reasons for labor turnover. In the Belorussian SSR, for example, during the past 3 years 1,077 zootechnicians with higher education were sent to rural areas, but the increase in the number of them in rural areas amounted to only 273 people. The picture was the same with bookkeeping. In 1983 15 percent of the head specialists left farms of the republic.

Many specialists are working in positions that do not correspond to their specialty. At the same time the positions of specialists remain vacant. In the Belorussian SSR as a whole as of 1 April 1985, according to the staff distribution chart, 937 positions (9 percent) for veterinaries, veterinary assistants and technicians were unfilled, 676 (9 percent) for zootechnicians, 518 (7 percent) for agronomists, 485 (3 percent) for bookkeepers and 246 (4 percent) for economists.

In agriculture labor participation in the labor economy is constantly increasing. In the country as a whole one sovkhoz worker has worked 278 days and one kolkhoz worker--267 days; labor turnover is decreasing and labor discipline is increasing. At the same time the utilization of labor resources and the organization of labor on the farms are in need of essential improvement. During the period of the main agricultural work workers and employees are sent to the kolkhozes and sovkhozes from other branches of the national economy, and the number of people enlisted from the outside (average annual) is increasing, amounting to 1 million. At the same time there are significant shortcomings in the utilization of the labor force. In spite of a certain reduction in personnel turnover, on the kolkhozes of the country each year a large number of permanent workers are replaced. Losses of working time are decreasing slowly and the influence of seasonal work on the employment of the kolkhoz workers is essential.

Turnover is high among graduates of agricultural vocational and technical schools. Thus in 1984 more than 30 percent of the overall number of SPPU graduates who came to the kolkhozes and sovkhozes left during the same year.

Measures are being taken to increase the material incentives for agricultural workers. Salaries have been increased for management personnel and specialists, regional coefficients have been introduced for the wages in the regions of the Urals and Kazakhstan and there are increments to wages for continuous service in animal husbandry for all permanent workers of the Nonchernozem Zone.

These measures have had a positive effect on increasing labor activity and bringing together the levels of wages of workers in agriculture and industry. In 1984 the average monthly earnings of sovkhoz workers amounted to 179 rubles.

During recent years the levels of wages for sovkhoz and kolkhoz workers have come much closer together. While in 1975 the wages of kolkhoz workers were 28 percent lower than those of sovkhoz workers, in 1984 the difference was 17 percent. In a number of union republics (Georgia, Azerbaijan, Tajikistan, Armenia and Estonia) the wages of kolkhoz workers exceeded the wages of sovkhoz workers.

But it should be noted that at the present time the growth rates of wages in public agriculture still outstrip the growth rates of labor activity.

Improvement of the utilization of the labor force, reduction of losses of working time and strengthening of labor discipline constitute an important reserve for increasing labor productivity in agriculture. We need to accelerate the rates of increase in labor productivity and agriculture is also dictated by the fact that the entire increase in the gross output in this branch is being provided as a result of increased labor productivity alone, with a reduction in the number of workers. Socialist competition has now been developed in the country for a 1-percent above-plan increase in labor productivity. In agriculture an increase of only 1 percent is tantamount to obtaining an additional gross output of approximately 1 billion rubles, or economizing on the labor of 230,000 people.

In public agriculture the average annual growth of labor productivity during the past 10 years in the USSR as a whole has amounted to 2 percent. Scientific and technical progress is a decisive condition for further increasing labor productivity in the branch. A good deal has already been done in this area here, but there is still a lot left to do.

At the present time the basic field work (plowing, planting of grain crops, cotton and sugar beets, harvesting of grain crops) has been fully mechanized. Mechanization of the planting of vegetables and potatoes, interrow cultivation of sugar beets and corn, haying a number of other jobs is close to completion. The level of mechanization of labor-intensive processes in animal husbandry has increased: the distribution of water, the diistribution of feeds, the cleaning of the premises and so forth. But in spite of all this the proportion of workers engaged in manual labor in agriculture still remains high. Most of the workers engaged in manual labor are vegetable growers, grape growers, tobacco growers, cotton growers and workers who handle cattle and sheep. A higher level of mechanization of labor-intensive jobs, the introduction of comprehensive mechanization, industrial technology for cultivating agricultural crops and increased production of animal husbandry products on an industrial basis--all this will contribute to increasing labor productivity and releasing personnel.

At the present time a large amount of work is being done to introduce new forms of organization and stimulation of labor in agriculture.

The brigade contract has become widespread and the kolkhozes and sovkhozes in the majority of union republics of the country.

The number of kolkhoz and sovkhoz workers employed under the brigade contract in 1984 amounted to 23 percent, a 2.3-percent increase over 1983; brigades and teens working under the collective contract were assigned 48 percent of the arable land and 40 percent of the tractors (and they produced 36 percent of the total volume of gross output). Labor productivity was almost twice as high here. An analysis of the existing statistical report shows that the study of the effectiveness of work under the brigade contract requires improving initial accounting and solving a number of other problems.

Retaining personnel in rural areas and reducing their turnover constitute an important problem of the day. To this end a broad program of social transformation of rural areas is being carried out. The rates of housing and cultural-domestic construction have been increased in rural areas. The average provision of housing for rural residents is somewhat higher than for city residents and amounts to 15 square meters per one resident while in the city it is 13.7 square meters. At the same time housing in rural areas is not as well provided with running water, central heating and sewage systems. There are large differences in the level of consumption of consumer services between rural and city residents; the staffing of rural institutions with medical personnel is inadequate. There are large problems in road construction; many agricultural enterprises do not have paved roads and they are not connected with general-purpose roads.

Statistical agencies are faced with large tasks for improving the statistical study of personnel. First of all it is necessary to solve a number of methodological problems pertaining to the study and analysis of the number of management personnel on kolkhozes, sovkhozes and interfarm enterprises, farm specialists and skilled personnel. Especially constant attention should be given to the study of new forms of labor organization on the kolkhozes and sovkhozes and also the organization of production processes and the role of specialists in this matter. It is necessary to deeply develop problems of the interconnection between the educational level of managers and the effectiveness of production, the qualifications of personnel and the results of their work, the length of service and the final results of work, and so forth. It is necessary to study deeply the effectiveness of wages under the brigade contract. Many methodological problems need to be improved--wages for specialists in rural areas, the connection between the proportions of material incentives and questions of labor productivity, the results of production and so forth. The need to resolve all of these issues as quickly as possible becomes especially great because of the introduction into agricultural production of new intensive technologies for obtaining crop growing and animal husbandry products.

Much will have to be done to improve the statistical study of questions of labor turnover, its causes and solutions, and the social problems in rural areas that are related to this. It will be necessary to revise the existing reports and conduct a number of selective investigations.

State statistical agencies are faced with new tasks in connection with the adoption of the decree of the CPSU Central Committee and the USSR Council of Ministers of 14 November 1985, "On Further Improvement of Management of the Agroindustrial Complex."

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CARTOONS ILLUSTRATE PROBLEMS IN LABOR MANAGEMENT

Moscow TRUD in Russian 6 Apr 86 p 4

--And where is the brigade, Petrovich?
--They're at headquarters, at the meeting to finish the building ahead of time.

Drawing by O. Pomochilin

Moscow TRUD in Russian 15 Apr 86 p 4

--I'm here inspiring the brigade!

Drawing by V. Levonyuk

CSO: 1828/112

EDUCATION

HIGHER EDUCATION MINISTER CLARIFIES VUZ ENTRY REGULATIONS

Moscow IZVESTIYA in Russian 3 May 86 p 3

[Interview with G.A. Yagodin, corresponding member of the USSR Academy of Sciences and USSR minister of higher and secondary specialized education; date and place not specified; for information on regulations, see JPRS USSR REPORT: HUMAN RESOURCES, No JPRS-UHR-86-007, 28 Apr 86 p 53; first paragraph is IZVESTIYA introduction]

[Text] Beginning this year new regulations on VUZ enrollment are taking effect. They have already been reported in the press, but the public's interest in this innovation is unabated, and we have asked the minister to comment on the regulations and to answer readers' questions.

[Question] Gennadiy Alekseyevich, will just as many VUZ freshmen be enrolled now as were last year? Will there be a dropoff of acceptance?

[Answer] No, there will not be a drop. Last year about 2 million young people expressed a desire to pursue higher education. More than a million of them became university students. VUZ's will accept just as many freshmen now as well.

[Question] Dissatisfaction with the work habits of those who come to study is frequently expressed in the letters which we receive from higher educational institutions. I will quote a letter from Professor V. Glazyrin of Alma-Ata, doctor of agricultural sciences: "I remember perfectly the students in the first years after the war, their persistence and drive. As a rule the nucleus of the freshman class were those who had recently been on the front and had a passionate desire to learn. There was no need for faculty members to keep watch in the dormitories to get the idlers to sit down to work. We had a militant Komsomol organization. Now it is not uncommon to meet students who do not have a real interest in working. Some of the graduates are not capable of supervising the production section assigned to them." The professor feels that the trouble lies not so much in the students' lack of knowledge as in the fact that they have not learned to do strenuous work and they are not ready for independence. What sort of hopes does Minvuz place on the new acceptance regulations from this standpoint?

[Answer] We hope to improve the makeup of the student body. We want to provide assistance to those who enroll in selecting a specialty, taking into

account their inclinations and abilities, their experience, successes achieved in the workplace and creativity, and their general and occupational training. I would say that the vocational guidance commission which will meet with the secondary school graduates is like a credentials commission. This is a conversation, not an examination. Its purpose is familiarity with the enrollee's personality. I will give examples to illustrate this. A young man is going to an engineering VUZ. In the interview we learn that he has successfully completed a vocational and technical school. He worked in production for 2 years. This person has chosen his profession with an awareness of what he was doing. Does he need a "tutor" who would see that he did his schoolwork? I don't think so. Nor do I think that a man like that will lose his bearings when he goes off to a plant with his engineering degree. Another possibility. A young woman has spent 2 years working as a hospital orderly. We can assume that her devotion to medicine is more reliable than that of a girl straight out of secondary school. A third example. A lad has honorably performed his international duty in the ranks of the armed forces. We will, of course, give preference to him when he applies to law school over secondary school graduates who are less mature from the civic standpoint.

[Question] The press and our newspaper in particular have written more than once about how abilities and even the talent of those enrolling are not sufficiently taken into account in VUZ competitions. I once reported on a schoolboy fascinated with astronomy. He was the first person in the world to spot the emergence of a star in the constellation Dolphin, and it was from his photographs that it was possible to follow development of the flash of a nova. The schoolboy's report was published. But he did not get enough points in the tests and was not enrolled in the school of physics. Only later did he manage to transfer from another VUZ to MGU. Incidentally, after he became a student, he made another discovery. The prize winners in all-union championships in mathematics and physics do not always get to the university.

[Answer] Under the new rules the chances of gifted kids getting into the VUZ are improved substantially. And not as an exception, but on a regular legal basis. Today there is a particular need for talented people whose thinking is out of the ordinary.

[Question] But, Gennadiy Alekseyevich, we also get in the mail angry reactions to the comparatively new regulations. The authors are worried that the interview might open up a loophole for pulling strings. They write, for example: "Is the commission going to give a zero mark to a secondary school student whose father works in the ministry of the sector in question? They will say that the son is following in the footsteps of his parents."

[Answer] I would put that question differently. Is it good or bad for children to follow in the footsteps of their parents? I personally would say that it is good. There are conversations in the family on professional topics, a library is built up in the specialty, and the parents take the kids to the plant and on field trips as they grow up. They guide their schoolwork with a purpose. The interest developed in the family for a profession that is traditional within the family--what can be better for the young person who is making his own choice? We know of dynasties of workers, military men, actors, and

scholars. But if someone, as they say, wants to push his children into "his own" VUZ although they have no desire to work hard, we do not intend to look the other way. A prestigious commission will block the way to what is called string-pulling. The vocational guidance commissions will have a solid membership: the chairman will be a rector or dean; his deputy the prorector or assistant dean; and the members of the commission will include representatives of the VUZ's party and Komsomol organizations. I think that such a group wil not easily be pressured from above or from the side.

[Question] Gennadiy Alekseyevich, I will quote a letter from K. Kovaleva, who lives in Moscow: "It is rumored that on Open Doors Day in one of the Moscow VUZ's the secondary school students are given this advice: Write and submit papers, bring with you instruments you have made. This will give them additional points in the interview. Will that actually be the case? After all, this opens the door to nephews, "proteges," acquaintances, and other favorites. Allowing work done at home in a competition? Yet won't their authorship be doubtful? In such a system favorites who submit work done by professionals will receive additional points they have not earned." A reasonable question, isn't it? Questions like this are being asked in the other letters as well. One of them even asks maliciously in a postscript: "Should one order a couple of easy papers from friends in electronics, or can one do without that kind of petty trickery?"

[Answer] Secondary school graduates do not need any sort of work done at home. Advice like that is completely unauthorized and has no basis at all. We do have VUZ's where the interviews are conducted like an examination. At the "Phys-tech," for example. We will not break up their tradition. But I emphasize once again: The vocational guidance commission is set up like a credentials commission. It will only be examining what is confirmed by everything the enrollees do.

We recently took interest in a letter from a young woman which had been sent to the highest levels. She was upset because she had not been accepted at MGU and had not been granted the established benefits since she was a painter in a housing administration rather than a construction trust. A thorough check was made of the documents. And what was the upshot? She had been working for only 2 weeks. We will not be lenient toward those who play tricks. Every preference must be backed up with documents.

[Question] Gennadiy Alekseyevich, can one get some idea in advance of what the commission will require to give the secondary school graduate three points, what it will require for two, for one? Is there some instruction which governs the commission and provides protection against subjectivity? In short, what guarantees are there of fairness in awarding points?

[Answer] Last year the ministry conducted a large-scale experiment in 58 VUZ's. It involved 16,000 young people. The experiment went well. Minvuz used it as the basis for preparing a standard regulation on interviews before the vocational guidance commission, which has been given the powers of an examination commission. On this basis VUZ's will draft their own regulations so as to take into account the requirements which must be met by the specialists

whom they are training and the conditions under which they work. Enrollees can familiarize themselves with these regulations of the VUZ's before they submit documents to the acceptance commission.

I will not run over the standard regulation in its detail, but since it has been arousing such intense interest, I will touch on the main points. Young people will get three points who have graduated from an SPTU or secondary specialized educational institution with an excellent record and have been included among candidates for VUZ enrollment or who have already worked the period of time required for the respective field by the institute providing training in that specialty. We guarantee three points in the interviews in medical institutes to junior medical personnel who have practical experience of at least 2 years and to middle-level medical personnel with at least 3 years' experience. There are three possible points to be awarded for young people's success in all-union and republic championships, competitions, reviews, and the USSR Exhibition of Achievements of the National Economy (exhibit medals).

There are three points to be earned for an author's certificate on an invention or for three or more significant suggestions to improve organization and efficiency. Secondary school graduates applying to VUZ's in the field of physical education may receive three points if they have qualified for the title of candidate master of a sport or for a higher title. And those who have those same titles in the technical aspects of athletics will receive the same preference when applying to a VTUZ in the respective field.

Two points are awarded to military personnel discharged into the reserves and to young people who have at least 2 years' practical experience in the specialty as well as to those who have not yet acquired that experience, but have been sent to study fulltime from the place where they work.

Young people living permanently in a rural locality may receive two additional points by choosing a specialty in the fields of public health, pedagogy, agricultural construction, cultural and educational work, library science, or physical education, or by enrolling in cooperative institutes.

Two additional points are also awarded to those going to VUZ's which train teachers and skilled craftsmen qualified as instructors in on-the-job training if they have recommendations from the pedagogical councils of schools, SPTU, tekhnikums, public education authorities, work collectives, and city and rayon Komsomol committees. There are two points that can be earned by those who have graduated from secondary specialized schools (grades) or vocationally oriented schools for young people (associated with an VUZ) with good or excellent records, for the achievements of prize winners in kray, regional, and oblast championships, competitions, and reviews, as well as scientific-technical and other scientific and vocational championships of that VUZ which the secondary school graduate has chosen.

There is an extra point which can be earned by young men and women who have any sort of other achievements in the workplace, in vocationally oriented creativity, in athletics (only for secondary school graduates going to physical

education institutes), and in creative competitions in the disciplines in which the VUZ they have selected specializes. A point may also be awarded to those who have successfully done long-term forms of vocational guidance work. Preparatory courses, for example. We take into account the conscious and purposive work of those who have taken a deep interest in a subject or group of disciplines in which the VUZ specializes; this serves as a guarantee that the choice made was a serious one. Finally, one additional point can be earned by persons who have attributes valuable to a particular vocation. Let us say a person has come from a remote area where there is an acute need for specialists being trained by the VUZ. A preference point may also be earned by young men who choose a specialty needed in the workplace where employment of women is restricted, for example, in the coke-chemical industry.

[Question] According to the new regulations one of three examinations determines the VUZ. Could there be surprises for the secondary school graduate here?

[Answer] Four examinations have been left in the republic VUZ's for certain specialties in the humanities. An examination is being added in the national language and literature. For those enrolling for specialties related to computer technology and applied mathematics two of the three examinations will be in mathematics.

I would like to emphasize that the new regulations do not weaken, but strengthen the principle of competition in selection of future students at the university level. The benefits previously prescribed through various channels have now been brought into a single stream, and the general picture becomes far more vivid. We are trying to minimize "the luck of the draw." A serious evaluation is made of not only what a person has read and assimilated, but also how he has lived and worked and what he has achieved. A check is made into the civic maturity of those enrolling, into their talent, their work habits, their determination and their inclinations toward their future work.

[Question] What if a secondary school graduate has not succeeded or has not been able to prove himself in something so far?

[Answer] He can give an account of himself in the examinations. If he has done well, he can enter the VUZ even without additional points. Incidentally, the acceptance commissions of VUZ's have been given the power to determine specialty without a third examination for those enrollees whose secondary school record contains no "3's" and who have received a score of good or excellent in the two entrance examinations. Medal holders take one examination as specified by the acceptance commission, and if they score a "5" on it, they are exempted from the rest.

I would like to caution young people against excessive vanity with the commendatory certificates and running around in championships. Commendatory certificates in particular subjects and success in rayon championships do not as a rule earn points. The requirements in championships, exhibitions, and reviews should not be lowered. After all, it is important for us to find those children who are truly gifted. A manifested inclination toward serious work, development of one's inclinations and gifts--those are the things in young people intending to enter a higher educational institution that our requirements are aimed at.

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EDUCATION

EDUCATION OFFICIAL DISCUSSES NEW VUZ ENTRY RULES

Moscow KOMSOMOLSKAYA PRAVDA in Russian 18 Mar 86 p 1

[Interview with G.A. Yagodin, USSR Minister of Higher and Secondary Specialized Education, Corresponding Member of the USSR Academy of Sciences, by T. Korsakova, under the rubric "A Timely Interview": "A Choice for Life"]

> [Text] Springtime. One of the signs for the journalists is that the editor's mailbag begins to contain more letters from secondary school graduates. Today we can inform them that new rules have been established for entering the nation's higher educational institutions. A newspaper correspondent discusses the special aspects of entering a VUZ this year with G.A. Yagodin, Minister of Higher and Secondary Specialized Education and Corresponding Member of the USSR Academy of Sciences.

[Question] Gennadiy Alekseyevich, for a number of years the press, including KOMSOMOLSKAYA PRAVDA, has campaigned to have VUZ enrollment based not on a random process but consisting of individuals who have made a clearly aware choice and are preparing themselves for training or for work in their chosen field, and to get the admissions commissions to accomodate precisely these people. And now the long-awaited concept "career orientation interview" has appeared in the new VUZ acceptance regulations. How is this going to be performed?

[Answer] First of all, I would like to say that the entrance exams, like those of the past, designate competition and the opportunity to select the best people for the higher school. There are certain significant changes in specific points, however.

The career orientation interview will be conducted prior to the exams. A special commission will be required to determine whether an applicant has made the correct choice, and the latter will have to justify his choice both with his own interest in the future occupation and with appropriate biographical data. Let us say that a young woman has worked 2 years as a hospital attendant and wants to enroll in the medical field. Has she demonstrated with her work that she is devoted to medicine? Absolutely. And we can give her three points, the highest rating for the interview.

We will take into account achievements in rationalization and invention work, victories in competitions in mathematics, physics and other subjects, training at VUZ youth schools, a practical work record of at least 2 years, and service in the Soviet Army. Points will also be given in the interview to graduates of

secondary specialized educational institutions and secondary vocational and technical schools who have graduated with honors or have worked a specified period of time in their specialty, when they enroll in the corresponding field of study, and so forth. All of the basic information will be provided in a handbook. However, each VUZ will have to establish its own rules on the career orientation interview and the makeup of the career orientation commissions on the basis of standard regulations and to inform the secondary school graduates in good time.

[Question] Do you believe that the interview will help also to determine the individual's civic maturity?

[Answer] Yes! If a young man has honorably fulfilled his international duty and wants to become a lawyer, for example, he should be given preference--in this case, three points for the interview. People who in their youth have already shown themselves to be civic-minded--that is, have distinguished themselves on the job, in previous training or in the military service--will receive the "maximum" for the interview. Such people will take a responsible attitude toward their studies at a VUZ.

I must say something here about the role of the Komsomol committees during the period of the entrance exams. It is an exceptionally important role. VUZ Komsomol members work on the acceptance commissions. They are essentially consultants to the applicants and help them to select the right profession. The Komsomol is an enormous force at the VUZ. This is precisely why we are adding representatives of the Komsomol committees to the career orientation commissions with the status of official members. Along with the right to vote, they will have the opportunity to defend their point of view.

[Question] But what if the secondary school graduate is unaware of any special merits he has and... simply fails to attend the career orientation interview?

[Answer] So what? The fact that he does not have the commission's recommendation or the extra points will not prevent him from earning the necessary number of points for entering a VUZ in the competition itself.

[Question] How many exams will the secondary school graduate have to take this year?

[Answer] Three. We believe that in combination with the interview this is perfectly adequate. A composition will be a general requirement for all of the specialties. It will demonstrate not only the individual's literacy (which is of considerable importance in and of itself), but also his thinking ability and his development. I will be frank: we would very much like to have these compositions reveal the applicant's personality as fully as possible and to get away from the standard set of elaborated subjects....

The second exam for those entering the fields of biology, agriculture (except for the engineering and technical specialties), medicine and certain others is in biology. The second exam will be not the history of the USSR, but social science, for the fields of journalism, law, philosophy, philology, history and art. The applicant's social qualities are manifested better on this exam. Following the 27th CPSU Congress, we have an enormous theoretical treasure in the form of congress materials. The secondary school graduate will be expected to demonstrate a good knowledge of these materials in the entrance exam in social science, of course. Finally, an exam in mathematics will be taken by applicants for all the engineering, technical and "exact" specialties.

The third exam will be established by the VUZ itself in its own field. It will be history for history students, chemistry for chemistry students and physics or chemistry (at the discretion of the institute) for medical students.

[Question] One young woman from the Ukraine wrote us to say that she was afraid the gold medal she received last year would lose its significance this year....

[Answer] It will not. A gold medal is a gold medal. If the holder of the medal (gold or silver) receives a "five" on one exam, he will be exempted from the remaining exams. The rights of the medal holders are particularly stipulated for entering the specialities with an acute shortage of personnel.

[Question] Last year a number of the nation's VUZs performed an experiment in the acceptance of replenishments. Was it successful?

[Answer] Absolutely. And we are now introducing it universally. Applicants for specialities and forms of study defined by the VUZ admissions commission (I would like to particularly stress this refinement) who do not have any "threes" in their secondary education records can count on a place at the VUZ immediately upon receiving at least nine points for two entrance exams. The same applies to all applicants for specialities in which there is an acute shortage of personnel, who pass two entrance exams with at least eight points. They are exempted from the third exam.

[Question] One frequently sees a letter from a young woman in the student section's mail: "I want to work as an engineer at a mine (or in atomic power engineering, for example), but they will not accept me. This is not equal rights"! That young person is apparently forgetting or has not thought about the fact that nature has made her to be a mother, and only for this reason....

[Answer] Yes, I would like to reaffirm the fact that the regulations which young women sometimes stubbornly ignore, argue about with the admissions commissions, and so forth, are dictated only by concern for the female applicants. They involve restricting the acceptance of females for a number of specialities which could be harmful to the female organism. A restriction is not a prohibition, of course, but if the acceptance commission gives preference to a young man, do not be upset. You should also know that these matters are worked out not by the higher school, but by the AUCCTU and the Ministry of Health.

[Question] Gennadiy Alekseyevich, I would not like to bring up so-called sensitive matters just before that joyous admissions period. That is why they are sensitive, however: they cannot be avoided, but must be confronted. In your opinion, will the new admissions rules be a guarantee of fairness?

[Answer] I believe they will! If I did not, it would be very difficult for me to do my job.

[Question] You know what I am talking about.... Every summer we receive not a few letters reporting omissions or even abuses in the VUZ admissions process. I have read more than once: "We have to get together a certain amount of money

if I want to enter the institute." This all sounds preposterous, but the facts are sometimes confirmed....

[Answer] Bribe-taking is a disgraceful exception, and every instance of bribe-taking needs to be investigated at the higher school under a microscope, so to speak. We need to show in the press and on television how an individual to which the state has entrusted the training and education of replacements could lower himself to accept a bribe. The criminal absolutely must be punished. All of the "information" most frequently comes from rumors, however, from incorrect information or the absence of information. Does it not happen, for example, that an individual has not entered a VUZ because of his own lack of preparedness, but it seems to him that all of the others have become students not entirely in accordance with the law? I repeat, however, all abuses must be uncompromisingly revealed.

[Question] The flow of secondary school graduates is not even over the years. Chemistry, physics, space exploration and history have alternately been among the most popular fields, and this has always been determined by some sort of processes in the society itself. Medical institutes and law VUZs, as well as trade VUZs have become particularly popular in the past few years... where, in what specialities, do you believe we should anticipate an increase in interest on the part of secondary school graduates during the next 2 or 3 years and during the entire new five-year plan?

[Answer] In all of the fields involved in the reconstruction of the national economy and the enhancement of public labor productivity, in all of those professions which will help us to accomplish the tasks set for the nation at the party congress. These are primarily the engineering professions. Today, there is a lot of talk about a change in the engineer's status. When this is discussed, I would still begin not with the matter of increasing wages, however, but increasing the degree of usefulness to the nation. When the youth build their lives and chose a career, they do not use the criterion of wage level and not the opportunity to gain access to scarce commodities or some other benefits, but something entirely different. The youth are basically patriotic, profoundly patriotic....

The party congress set some large tasks for the higher school, and perhaps the main one is that of improving the training of specialists. In order to produce good specialists, however, we need at least to select good students. I believe that the new VUZ acceptance rules, which combine national economic interests with those of the individual and also expand the authority of the VUZs, will contribute to the achievement of this noble goal. All of this is in keeping with the restructuring of the higher school underway, which was also discussed at the 27th CPSU Congress.

[Question] What would you like to wish the secondary school graduate of '86?

[Answer] Success. Just that. Luck is almost always a random matter, after all, while success is a result of one's entire preceding life.

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EDUCATION

USSR EDUCATION MINISTER RESPONDS TO READERS' QUERIES

Moscow UCHITELSKAYA GAZETA in Russian 20 Feb 86 pp 1-2

[Unattributed article in which S.G. Shcherbakov, USSR Minister of Education, replies to written questions from UCHITELSKAYA GAZETA readers: "Minister Answers Readers' Questions"]

[Text] The editors requested S.G. Shcherbakov, USSR Minister of Education, to answer several letters of readers on several troubling questions relating to school life. In publishing the article, we wish to announce that the dialogue with readers will be continued.

[Question] Comrade Ivasenko, a docent from Tyumen State University, and teachers from Krasnodar Kray and Tula write that certain administrators continue to assess the work of pedagogs in educational institutions on the basis of a success percentage and oblige pedagogic collectives to compile all sorts of reports and data.

[Answer] Materials from investigations by the USSR Ministry of Education showed that in a number of regions of the RSFSR, Kirghiz SSR, Moldavian SSR, Ukrainian SSR and the city of Moscow, in addition to state reporting established by the USSR Central Statistical Administration, schools continue to be asked for additional reporting not considered obligatory. The greater portion of the reports, independently required by local educational organs of schools and educational ministries of union republics, duplicate the prescribed statistical reporting. This happens because of superficiality in analysis of obligatory statistical data. The need for additional reports would disappear of its own accord if the basic statistical information were examined locally with due care. The fault of education organs is that investigation into the status of instruction and educational work in schools is being replaced by the demand for numerous inquiries, reports and data.

The USSR Ministry of Education is working on putting statistical reporting into good order and reducing it. The progress report (Form No OSh-2) has been abolished. In 1985 alone, forms for statistical reporting by schools and rayon education departments were reduced by 28 percent. During the year the daytime general educational secondary school will provide the USSR Ministry of Education with only a minimum of the most necessary business information for

working out current and long-range developmental plans of general educational schools, for financing, and also for solving administrative questions.

[Question] Inspectors Kushmatov from Kirghizia, Yevseyev from Altay and a teacher from Baku write about difficulties in the work of inspectors of rayon education departments caused by the profusion of paperwork, low wages, the inadequate level of inspection work, and personnel turnover.

[Answer] For the purpose of accomplishing the tasks designated by Basic Directions in School Reform, the USSR Ministry of Education, besides developing new teaching and methodological materials, is also engaged in the preparation of new normative documents, methodological recommendations and the like regulating the life and work of school collectives. This has even temporarily resulted in increasing the number of new documents replacing obsolete ones. Nautrally, some of them have required concrete plans and measures. On the other hand, inspections revealed that many documents are late in reaching those who implement policies because of the procrastination of education departments.

As for presentation of various reports and inquiries for sanitary-epidemiological stations, State Fire Inspection, DOSAAF, OSVOD [All-Russian Society for Marine Rescue] and others, these questions should be solved by education organs with the help of local party and soviet organs, resolutely freeing the school and teachers from functions and duties not belonging to them.

In order to eliminate formalism from school practice and evaluate the learning of school children on the basis of the achievement percentage index, the USSR Ministry of Education has worked out and sent to the localities for practical use the recommendation "On School Work Indicators" which provides an objective assessment of the results of teaching and educational work of the teacher and the school as a whole. It is aimed at boosting the effectiveness of pedagogic labor, establishing an atmosphere of creative search, and solidifying labor collectives. By determing the structure and standards for the staffs of rayon (city) education departments, raising salaries specified by pertinent directive documents for 1987, and reducing the flow of demands, inquiries, and superfluous information, we will overcome difficulties in the operation of rayon (city) educational departments, reduce personnel turnover, and boost the authority of inspectors.

A very important question is verification of pupils' knowledge. It is hardly necessary to argue that verification must be accompanied without fail by an assessment of the level of pupils' knowledge and skills acquired in their studies, and the correspondence of acquired knowledge to convictions and degree of formation of civic qualities and observance of ethical and moral norms of behavior. Judging work by its results is a requirement of life. A procedure containing useful recommendations has been worked out and sent to the localities for organizing such verification.

In teaching programs, special sections have been selected which clearly define approaches to assessing the knowledge of pupils both for theoretical and for practical parts of the school program. A list is given of fundamental

concepts and leading ideas of a course, the knowledge of which is obligatory for each pupil.

[Question] A. Fishchenko, the principal of School No 2 of the city of Lgov in Kursk Oblast, reports that he has to perform the functions of school custodian.

[Answer] The creation of rayon services for central maintenance of general educational schools and other educational institutions is specified in Decree No 313 of the CPSU Central Committee and the USSR Council of Ministers dated 12 December 1984. Unfortunately, this directive is not being carried out everywhere. At the same time, a number of republics (BSSR, Moldavian SSR) possess useful experience in the operation of such services.

Although the work of a school principal has never been worry free or easy, nonetheless it is unfortunate that the working hours of certain school principals begin with a visit to the boiler room. There are few city schools in the country that have their own boilers. They as a rule are turned over to the municipal services of local soviets.

Lgov is a small city. It has three schools, and it is clear that this problem will be solved in the very near future.

As for delivery of milk to the lunchroom, undoubtedly a misunderstanding occurred in this case. The lunchroom in the school is provisioned by the city's public-dining services. They assume the responsibility for delivery of milk.

In renting a vehicle for transporting equipment and other materials to the school, payment is based on billing the organization to which the motor vehicle belongs. A number of questions, including the acquisition of a New Year's tree, can actually be turned over to the school custodian. It is true that we have no desire to impose on a principal any kind of maintenance duties. But the principal is responsible for maintenance of the school. He organizes it together with the base enterprise. In Lgov, no possibility exists of creating a maintenance service for schools. We hope that the city soviet will help schools to more effectively solve maintenance problems with the aid of base enterprises.

[Question] Ye. Bashkirov from Moscow asks: "Has the school reform abolished the right of free selection of a vocation and have schools been given the right to decide for the pupil what he should be?"

[Answer] In accordance with the Fundamentals of Legislation of the USSR and the Union Republics on Education, universal secondary education is conducted in secondary general educational schools, secondary vocational and technical schools, and secondary special educational institutions which provide for the entire territory of the USSR strict continuity of instruction and education, an essentially unified content, and a uniform level for general secondary education. The pupils of senior classes are given the opportunity for in depth study in regard to their selection of individual subjects of the physico-mathematical, chemical-biological and social-humanitarian groups.

They may also select vocational-training specialization, taking into account their own interests and inclinations. But in a number of schools, individual vocational orientation work is not being conducted with pupils and their parents, and the interests and aptitudes are not revealed properly in a timely way. There are attempts to replace this work with willful solutions, which frequently creates conflicts.

The USSR Ministry of Education is taking steps in each individual case to eliminate instances when the work of education organs contradicts the Fundamental Directions of Reform in the General Educational and Vocational School.

[Question] Ya. Dadasyan, principal of Yerevan's School No 135, asks: "Why are school heads and education personnel not certified?"

[Answer] In implementing the school reform, a special place is assigned to certification of pedagogic personnel as an important means of further upgrading scientific-theoretical and methodological training not only of teachers but also of educators, senior Pioneer leaders in general educational schools, boarding schools, and children's homes of all types and designations, and educators in children's preschool institutions.

The school reform provides for an increased role for school principals and their deputies for teaching and educational work in improving the work of pedagogic collectives. In this connection, the question of certifying supervisory school personnel deserves special attention, inasmuch as the introduction of certification, it seems to us, should stimulate growth of the political level and professional skill of these personnel, should have a favorable effect on increasing their responsibility for the work quality of pedagogic collectives, and should contribute to improving the selection and placement of school heads and perfecting the management of the teaching and educational process.

But the question of introducing certification of head personnel of schools requires careful working out. At the present time, the necessary work is in progress. A draft has been prepared entitled "Provisional Statute on the Manner of Conducting Certification of Principals and Deputy Principals for Teaching and Educational Work of General Educational Schools of the Educational System." It is proposed to conduct initially an experiment in different regions of the country, to analyze its results and then--provided there are positive results--to carry out a transition to mass certification of these personnel.

At the present time, work in the Ukraine and Estonia is also being attentively studied. Here definite experience has been acquired in preparing a reserve of heads of schools and education organs.

[Question] Reader L.V. from Brest Oblast writes that the quality of labor should be the measure of pay. There is no doubt about this. He who works better should receive higher earnings.

[Answer] This principle is taken into consideration to a significant degree in the decree of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU "On Raising the Pay of Teachers and Other Educational Personnel."

First of all, it should be noted that pay rates and salaries of teachers and other educational personnel who have been awarded for their labor the honorary title "People's Teacher" are raised 50 rubles a month, while those who have been awarded the titles "Honored Teacher, "Honored Physician," "Honored Master of Sports," "Honored Cultural Worker," "Honored Art Worker," "Honored Master of Vocational and Technical Education" and "Honored Trainer" and are working in the same specialty as that of the honorary title, are raised 30 rubles.

The range of pedagogic personnel who will undergo certification has been significantly expanded.

Personnel who have received as a result of their certification the titles: "Teacher-Methodologist" "Instructor-Methodologist" have their pay raised by 25 rubles a month and those possessing the titles "Senior Teacher," "Educator-Methodologist" and Senior Pioneer Leader-Methodologist"--by 15 rubles a month.

Education organs have been permitted to create a bonus fund which will be used in agreement with respective trade-union committees for rewarding collectives of educational institutions and individual pedagogic personnel that have achieved the highest results in boosting the effectiveness and quality of educational and teaching work.

In conclusion, I would like to point out that the questions raised unfortunately touch in an insignificant degree questions of the main and basic directions in implementing the school reform: enhancing the quality of teaching and education, the transition to a new education content, and improving the labor training of school children.

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DEMOGRAPHY

DEMOGRAPHERS SPECULATE ON POPULATION IN YEAR 2000

Moscow LITERATURNAYA GAZETA in Russian No 1, 1 Jan 86 p 10; No 2, 8 Jan 86 p 13; No 10, 5 Mar 86 p 12

[LITERATURNAYA GAZETA survey: "Just How Many of Us Will There Be in the Year 2000?"]

[No 1, 1 Jan 86 p 10]

[Excerpt] On the eve of the new year the editors of LITERATURNAYA GAZETA asked prominent demographers what the size of the population will be at the beginning of the 21st Century. The questionaire covered the situation both on the planet as a whole and within our nation (naturally, the questions in this part of the questionaire were answered only by the Soviet scientists). We asked them a total of nine questions:

1. What will be the Earth's population in the year 2000?
2. What will be the birthrate during the last year of the 20th Century?
3. In what area of the planet will the birthrate be the highest, and where will it be the lowest?
4. In your opinion, what will our nation's population be by the year 2000?
5. What changes will occur in the social makeup of the population?
6. Will the aging process continue?
7. What will the family structure be?
8. How many Muscovites will there be?
9. How many cities will there be with a population of at least 1 million? Name the cities, if you can.

Each of the demographers answered only those questions he chose to answer. The answers are numbered to match the questions.

A. Vishnevskiy, Doctor of Economic Sciences

1. The UN forecasts are fairly accurate. The forecast for 1985 (4.8-4.9 billion people) made at the beginning of the '70s was confirmed. A figure of 6.1 billion for the year 2000 was named back in the 1963 forecast. Because of accelerated population growth rates in the developing nations in the '60s the forecast

was adjusted upward to 6.5 billion. It subsequently became clear that the growth rate "peak" had passed, however, and the UN demographers went back to the previous forecast.

2. Between 140 and 145 million babies will be born on Earth in the last year of the 20th Century.

3. The highest birthrate (an average of 5-6 babies per woman) will occur in certain African nations (the largest of these are Nigeria, Ethiopia, Kenya and Tanzania) and in relatively small states of the Near East (Saudi Arabia, the Yemen Arab Republic and others). The lowest birthrate (an average of 2 babies per woman) will occur in most of the European nations, the USA, Canada, Japan and Australia.

4. If the population growth rate of the past 15 years continued in the USSR, there would be approximately 315 million people in the nation in the year 2000. Because of a continuing drop in the birthrate and its spread to the republics of Central Asia, however, the actual size of the nation's population could be smaller by 10-15 million.

8. The growth of Moscow's population will slow, but even if it is only half that of the past 15 years, 9.5 million people will be living in Moscow in the year 2000.

9. There were 10 cities with a population of at least 1 million in the nation in 1970, and 22 in 1985. At least 8 cities will join the "millionaires club" by the year 2000: Rostov-on-Don, Volgograd, Saratov, Riga, Krasnoyarsk, Zaporozhye, Voronezh and Lvov.

[No 2, 8 Jan 86 p 13]

[Excerpts] B. Khorev, Professor

1. There are no grounds for distrusting the UN forecast. It might be added that the highest growth rates for the Earth's population are probably behind us. A great deal depends upon the success of the policy to limit the birthrate in China with its its population of a billion (more than one fifth of the Earth's population). It involves the "one-child family" principle. A special State Family Planning Committee has even been set up there, and the basic theory of population and demographic policy is taught in secondary schools.

2. We can probably not anticipate the world's birthrate to increase. A gradual transition to simple reproduction of the population, which is stabilizing in size, is now typical of the economically developed nations generally. The developing nations have already reached the ceiling in this respect, and a drop is forecast for them.

4. In all probability, 300 million people--slightly more, to be exact--will be living in the nation by the year 2000. I named the same figure several years ago in answer to a similar question from the newspaper.

6. By the year 2000 56 percent of the nation's population may be of working age. The portion of the population beyond working age will continue to grow, reaching 19 percent.

This means that the number of pensioners also will increase. This is a natural process and should not be regarded with alarm. We should focus attention on how to make the most complete and effective use of the remaining vital capabilities of the elderly and the old. This involves part-time work for the older age groups, different pension ages for different occupations, and so forth.

7. All indications show a universal move toward small families.

8. The population of our nation's capital has already passed the figure set in the old general plan for the end of the period covered, which has not yet elapsed. And so, Moscow is growing more rapidly than planned. Rates of growth for its population are dropping from decade to decade, however. Furthermore, the city has long been growing mainly as a result of migration, even though science demands a balance between "arrivals" and "departures." Moscow organizations have worked out different versions of future growth dynamics for Moscow's population by years, but it is not possible to make a truly accurate forecast of the number of residents in the capital for the year 2000.

9. I answered this question the last time: approximately 30 cities with populations of a million or more. This figure coincides with the so-called "extrapolated" version of the General Scheme of Distribution on the Territory of the USSR up to the Year 2000, which was ratified by USSR Gosplan in 1984. And so, this is now the official forecast, as it were. The General Scheme also contains another version, however. It is called the "special-purpose" version, and according to it there will be 26 cities with populations of at least a million in the nation by the year 2000.

G. Bakhmetova, Docent

1. Never before has the planet's population increased so rapidly as in the past decade. The population doubles every 20-25 years in certain regions. The period of doubling of the world's population as a whole is 35-37 years, however. According to our calculations the Earth's population will be 6.1 billion by the year 2000. This figure could differ within a range of $\pm$ 3-5%.

2. China and India will continue to have the largest populations. China's population was 1.46 billion at the end of this year. A purposeful and consistent policy of establishing one-child families is presently being conducted in the PRC. Based on this policy, the nation's population should be 1.3 billion by the year 2000.

4. The population of the USSR will reach 300 million by the year 2000. This forecase could be off by up to 5 percent.

8. Moscow had 1 million inhabitants in 1900. The population will apparently be 10 million in the year 2000.

9. The number of urban dwellers in all nations of the world is growing rapidly. At the beginning of the century (1900) urban residents accounted for only 14 percent of the planet's population. They will make up one half of the planet's population in the year 2000. There will be more than 3 billion urban residents at the beginning of the next century.

In 1850 there were only two cities in the world with populations of more than a million: Paris and London. In the year 2000 neither Paris nor London will be among the world's 10 largest cities. There will be more than 300 cities with populations of more than a million on the planet.

Cities in Africa, Asia and Latin America are presently experiencing the most rapid growth. The populations of such cities as London, Paris, New York and certain others are dropping.

L. Rybakovskiy, Professor

1. The UN forecast is 6.1 billion. The world's population will probably be fairly close to this figure.

2. Most likely 85-90 million.

3. There is no basis for assuming that the present situation will change significantly. The lowest birthrates will probably occur in individual nations of Western Europe--the FRG, Austria, Belgium and the GDR, for example. The highest birthrates will occur in the nations of Central Africa.

4. Our nation's population will most likely not exceed 300-305 million.

6. The aging of our nation's population will continue, since this is an objective proccess resulting both from the increase in average life expectancy and the continuing drop in the birthrate.

It would be fairly difficult to determine the number of pensioners, since not all of those who reach the pension age retire. In addition, there are the categories of people receiving disability pensions and others.

Every fifth citizen of the USSR is a pensioner today. The portion will obviously increase by the year 2000.

7. According to the 1979 census the average family size in the USSR was 3.5 members. We would want it to increase to 3.7 by the year 2000. It will most likely drop to 3.3.

8. It will be better if the number does not exceed 10 million.

9. 30.

M. Bednyy, Professor

1. The UN forecast "promises" an increases in the planet's population to 6.1 billion (to be precise, 6.119 billion) by the year 2000. There can be only an insignificant error, since the generation which will reproduce is already alive.

The following is an interesting comparison: The planet's population was 1.617 billion on the eve of the 20th Century--that is, the Earth's population has grown three times greater in 1 century (the 20th!) than in all of mankind's previous history.

2. In the last year of the 20th Century the birthrate for the planet's population will be within a range of 22-24 per 1,000 inhabitants.

3. The highest birthrate today is in the nations of Africa, averaging 45 per 1,000 inhabitants. In all likelihood those nations will continue to bear the palm for birthrate to the end of this century.

The lowest birthrate is in the nations of Western Europe: 12 per 1,000 inhabitants. A continuing drop in this figure would threaten inevitable depopulation, since it has been the trend for several years now in certain nations--West Germany, for example. There is therefore every reason to assume that the birthrate in the nations of Western Europe will not fall below today's level by the end of the century. It will still be less than half the world average, however.

4. At the beginning of the '60s, when another 4 decades remained to the year 2000, various writers and organizations calculated and came up with various figures: from 290 to 320 million people.

Today, because of the short interval of time remaining to the year 2000, more precise and accurate forecasts can be made: The total population of the USSR will be 310 million by the year 2000. These forecasts could err within a range of ± 2 million.

5. The role and significance of intellectual work, which is a prerequisite and a condition for accelerating scientific and technological progress, will grow significantly by the year 2000. The number of blue- and white-collar workers engaged primarily in intellectual work will increase correspondingly to 50 percent of the total (around 70 million people).

6. Foreign demographers calculate that the entire world population will age demographically by the year 2000, and more than 20 percent of the population in the nations of Western Europe will be 60 years of age or older.

The population of the USSR will be "younger" than that of the Western European nations by the year 2000. Nonetheless, the portion of the population 60 years of age or older will approach 18 percent.

7. According to the 1979 census the nation had 66.3 million families averaging 3.51 members.

Considering the fact that the party's program principles give special attention to the strengthening of the family, the family size will most likely remain at the present level to the year 2000.

8. Despite the "stringent" steps taken to limit the number of residents in the capital, the number is growing by approximately 100,000 a year and had reached

8,642,000 by the beginning of 1985. The capital's population is increasing mainly as a result of migration. If we extrapolate from previous trends into the future, Moscow's population could reach 10 million by the year 2000.

[No 10, 5 Mar 86 p 12]

[Excerpts] M. Bruk, Professor

1. The UN forecasts are too high.

According to our calculations the Earth's population will not reach 6 billion by the beginning of the 21st Century, but will be only somewhat greater than 5.9 billion. We base this on the fact that the absolute average annual growth rate in the world has stabilized at a level of 75-78 million in the past few years, and there is no basis for believing that it might increase in the future (the UN experts, however, calculate that the absolute population growth will reach 90 million by the end of the 20th Century).

Family planning is currently being practiced in approximately 70 nations. For example, it was recently reported that 1.046 billion people live in China. A strict "one-child family" policy is conducted there. Population growth is regarded as an important factor for increasing the public wealth in many nations, however.

4. The natural growth rate for the population of the USSR will fall somewhat. The population of the USSR will be 308-310 million by the year 2000.

6. The average life expectancy will increase from 59 years in 1985 to 64 in the year 2000. The large differences in this figure between the developed and the developing nations will continue (it will be 74 years in Western Europe and 58 in Africa in the year 2000). The sharp increase in average life expectancy will produce an increase in the number of people over the age of 60, from 400 million (8.3 percent) in 1985 to 600 million (10.2 percent) in the year 2000.

7. The average family size is steadily falling (from 3.5 to 3.2 members in the USSR). The reduction in the size of the family and the sharp increase in the number of divorces (every second family divorces in the USA), the increasingly earlier and widespread separation of children from parents, and the growth in the number of singly-member families (a result, among other things, of the increasing difference in average life expectancy for women and men: women in the developed nations now live 7.4 years longer than men)--all of this is making it essential to resolve a number of serious social problems.

Jerzy (Cholcer), Professor

Only 15 years remain until the end of this century.

The economically developed nations will continue, I believe, to devote special attention to the conduct of a demographic policy aimed at ensuring straight reproduction of the population. The average life expectancy is expected to reach 80 years in certain nations, with an extremely low infant mortality rate.

In the economically undeveloped nations I would place at the forefront a demographic policy aimed at further limiting population growth rates while simultaneously implementing a judicious and prudent policy of social and economic development. The average life expectancy in Africa and Latin America will certainly not exceed 60 years. Infant mortality will continue at a relatively high level.

The most important thing in Poland up to the year 2000 will be the creation of the economic and social conditions for maintaining simple replacement of generations.

In all my forecasts I proceed from the premise that the policy of reason will triumph, that the peoples of the world will not allow a nuclear catastrophe to occur.

Everything indicates that the number of urban dwellers will grow rapidly to the year 2000. Both in the highly developed nations and in Latin America it could reach 75-80 percent of the total population.

We anticipate a population of 39-41 million in Poland by the year 2000. Around 64 percent of them will live in cities.

The contemporary birthrate ratio (the average number of children per woman) in the highly developed nations ranges from 1.3 (Switzerland) to 2.4 (Poland). In the economically poorly developed nations the figure is 7--even 8.1 in Kenya. It should be assumed that there will be a drop in the birthrate in those states along with their social and economic development and with a proper demographic policy.

I submit that to the end of the century the demographic policy in all of the world's nations can be based universally on persuasion and not repressive administrative measures.

The editors thank the foreign scientists who took part in the discussion, as well as TASS correspondents G. Arslanov (Beijing), V. Shapovalov (Warsaw) and V. Yaroshevskiy (Prague) for their assistance in organizing the information.

[Summation of discussion by Professor A. Kvasha of Moscow State University imeni M.V. Lomonosov: "Time Will Test the Forecast"]

It is clear to everyone today that the demographic forecast is an important element of social and economic planning. Unfortunately, this knowledge was gained by the difficult route of trial and error, which did enormous damage to the national economy and to all of us. I shall cite two examples.

The first example is the development of such a large social project as the program for the improvement and social development of the RSFSR's Nonchernozem Zone.

For a long time there was a massive outflow of population, primarily the youth, from that region. Between 1959 and 1970 the rural population of Pskov Oblast

between the ages of 20 and 29 years fell from 108,000 to 38,000. By almost two thirds! Because of this both the number of workers and the marriages and births all bore the stamp of the "skew." This was not taken into account, and fulfillment of the important social and economic program almost faced failure. In any case, the improvement of agriculture in the Nonchernozem Zone depended greatly upon the return--remigration, so to speak--of the young people to their native parts. This was indicated by the demographic forecast, but the "indication" was not used.

Nor was the demographic "indication" used in the development of another extremely large social and economic program, the development of Siberia and the Far East.

The demographic situation there is just the opposite: There are many young people, and weddings are frequent. This means, as the demographers say, that births have peaked. This peak is sweeping over the nurseries, kindergartens and schools. Everything is overcrowded! In Surgut 10,000 children stay home with their mothers because there is no room in the nurseries and kindergartens. Schools in Novyy Urengoy teach not 1,200 boys and girls each, as they are supposed to, but 2,000. They have seven first grades and seven second grades.

Naturally, many families are packing up and leaving. And frequently these are specialists, concerned about getting a good education for their children. The cadre situation is not an easy one in general in those places, and then there is this increased migration of the population. People barely arrive, only to leave again.

The demographic forecast should be an active one, with the data always at hand for those who participate in the planning. Furthermore, the forecast must indicate not just the total number of people, but also their age groups, how many boys and how many girls will be born, how many weddings there will be and the average number of children each family will want. And so, demographic forecasting is a complex task. If it is performed correctly, however, if we know, let us say, how many families we will have in the future, and what kind, then we can begin correctly planning the construction of housing and even individual apartments, the number of children's facilities and much, much more.

And now, a little about the demographic forecasts themselves.

Do not think that "population forecasting" has only come about in our time. In the 17th Century British Economist Gregory King produced 16 alternative forecasts for his own country and even for the world to the year 2100.

Proceding from the fact that the world's population doubled once every 435 years, he calculated that there would be 7.4 million people living in England by the beginning of this century. England's population was 38.2 million in 1901, however, five and a half times greater than the forecast. And this is not surprising! How could Gregory King have guessed that there would be a medical revolution in the 19th Century--that is, that germs would be discovered, that people would stop dying of smallpox and cholera, that infectious diseases would cease to eliminate them?

Attempts were made to produce forecasts in our nation before the revolution, but they became widespread in the Soviet age.

One of the first forecasts was based on the census of '26 by Academician S.G. Strumilin and Ye.M. Tarasov. They compiled a forecast for 20 years into the future. It subsequently became clear that the discrepancy between the predicted and the actual data was generally small--approximately 3 percent. These results were achieved in an extremely curious way, however. Just how was it done? The forecast for the '20s was understated and the forecast for the '30s was overstated, and the result was almost accurate.

Economist B. Bobynin also compiled a forecast from the 1926 census data, which calculated the RSFSR's population to the year 1941. It subsequently became clear that he had erred by approximately 20 percent, or by 20-25 million people. According to the forecast there should have been 130-135 million people living in the Russian Federation in 1941, but there were only 110 million. The trend toward smaller families was not adequately taken into account.

Incidentally, I must stress the fact that all forecasts without exception have shown that the most important thing is to determine the birthrate trend, to answer the question: How many children will there be in the families? This was confirmed also in the '60s, following publication of the forecast by the Central Statistical Administration of the USSR. It was calculated on the basis of a theory that there would be a continuing drop in the morality rate and a certain increase in the birthrate, that the nation's population would be 280 million by 1980. In fact, there were only 264.5 million of us at that time--i.e., 5.5 percent fewer. In general, this is not such a great error in view of the fact that the information base for the calculations was very, very incomplete.

Similar forecasts are also compiled today. They are based on data not just from the census, but also from a large number of selective demographic studies, as well as the conclusions of medical science on future reductions in the mortality rate and increased life expectancy. Finally, estimates of the future populations of individual regions take into account migration trends: how many people will arrive, and how many will leave. These processes are very complex and variable, and they depend upon many circumstances, but they still lend themselves to forecasting. Even fairly accurate forecasting.

In the opinion of most experts, the premise that the world's population will stabilize by the end of the next century somewhere around the level of 10-12 billion people has a fair degree of probability. This means that the age structure will level out and that overall population growth will practically cease. Or else it will continue at a very low rate. Why is it so important to stress this? Because for a long time it was imagined (based on contemporary high rates of population growth) that this would continue forever, that there would be 30-40 billion people living on Earth, that people would either have to stand on one foot on Earth or develop distance regions of space and live there.

The demographers believe that none of this will occur. Ten or twelve million is also a fairly large number, of course, but it is still not 30-40 million, and we no longer have to talk about the planet's being inundated by a flood of people.

How does one account for this difference in the numbers?

The previous, scary, if we may call it that, forecast was made not by demographers but by statisticians. It was made by non-specialists. They simply took the current growth rate and extended it into the future. This is absolutely incorrect, but these calculations were also of considerable importance for their time. They were caution-producing forecasts, and so they did play a social role.

And now let us analyze the forecasts of the world's most prominent demographers, published in LITERATURNAYA GAZETA this year. First of all, let us determine what is common and typical in them and therefore, most probable. To begin with, there is the fact that most of the demographers referred to the predicted rate of growth of the world's population for the year 2000 provided by the United Nations Organization. This can be explained. The information support for the demographic service has been improved, and data on the world's population, particularly that of the People's Republic of China, which were lacking for a long time, have now been published. The press, including ours, has reported that there were 1.046 billion people living in China at the end of last year. And so the accuracy of the forecast and the probability that it corresponds to reality have increased considerably.

Now, about the population of our nation. Most of the specialist gave approximately the same figures for the year 2000: from 300 million to 305 million. These are completely . . probable data, although the future growth of the nation's population depends upon many circumstances, including the effectiveness of the demographic policy. Its possibilities should not be overestimated, but even what is presently being done (state aid to families and to newly-weds) has slowed the decline in the birthrate to some degree. What happens now depends in great part upon the successful implementation of our national economic plans, particularly the improvement of the population's standard of living.

It should be noted that young people born at the end of the '60s--that is, at the lowest point in the birthrate cycle in our nation--will enter the most active child-bearing age in approximately 1990. Demographic policy measures are therefore particularly important right now. They should be carried out not only at the Union level, but at the regional level as well. There are programs of local demographic policy in Latvia, the Bashkir ASSR and Moscow. They are being developed in a number of other regions in the nation. Efforts by individual interprises and kolkhozes and their assistance to families, particularly families with children, can obviously play a considerable role.

And now, a few more thoughts about the results of the survey.

According to the answers, almost all of the specialists believe that from 9.5 to 10 million people will be living in MOscow in the year 2000. What needs to be added to this? If we orient ourselves not toward an endless influx of workers from outside, but toward internal resources, the mechanical growth of Moscow's population should drop to a normal level. What would this be?

The city has always experienced that migration which we demographers refer to as "family" or "marriage-related"--that is, migration resulting from the marriage

of women (or men). The number of those brought in "within the limit" must be reduced, however. The city's population can clearly not continue to grow as disproportionately as it is growing today--mainly in the form of new arrivals.

A comparison is not proof, as they say, but we know (the demographers indicated this in their answers on the questionaire) that many capital cities of foreign countries have already ceased to grow. More than that, some of the largest capital cities are now losing population. It would be difficult to say whether Moscow will move in this direction, and we need to ascertain whether this is necessary. This is one of those serious tasks, however, on which many Moscow organizations--design, planning and scientific--are presently working.

I hope that most of us--both the specialists and the readers--will live to the year 2000 and verify for ourselves the accuracy of today's calculations. And so, as the poet said, "drop in a thousand years from now, and we can have a talk!"

11499
CSO: 1828/85

DEMOGRAPHY

ARTICLE DISCUSSES 1989 ALL-UNION CENSUS PREPARATIONS

Riga SOVETSKAYA LATVIYA in Russian 2 Feb 86 p 4

[Article by L. Shakovets: "Questionnaire From the Soviets of the Country: Every Citizen Will Be Asked 18 Questions in the Course of the Next All-Union Population Census"]

[Text] "This important national endeavor will take place in January 1989," reported the deputy chief of the Latvian SSR Central Statistical Administration, Maygonis Yanovich Yumikis. Even now, preparation for the census has begun, incidentally the seventh in the history of the Soviet state. Each census has been a large scale and rather complex organizational matter, requiring a great deal of effort. Only our republic will operate around 5500 census takers [schëtchik]. Also, processing the results of the census requires a lot of work and time.

Are such expensive statistical operations necessary when the country is conducting demographic, sociological and other kinds of research? Yes, it is necessary. Actually only a general census gives complete information about quantity, nationality composition, and population migration in the territory of the USSR, education levels, an assessment of economic sectors, and labor resources. The results of the 1989 census will help to analyze, in greater depth, the results of the creative activities of the Soviet people at its present stage. The results will be considered when working out current plans for the economic and social development of the USSR and union republics, and also for programs planned for the future. The results of the next census will be the basis for working out demographic predictions, studying tendencies for numerical fluxuations, the composition and territorial migration of inhabitants.

Statisticians have a lot of concerns ahead. Right now their main one is preparation for the census together with scientific organizations and demographers. As before, it will be coordinated with Gosplan, interested ministries, and departments.

Continuity will be maintained for the study of population changes by keeping census sheets. Therefore, the current questionnaires, like the previous ones, may contain questions on age, composition of the family, marital conditions, education level, training,

nationality, native language, work place. In all, 12 basic and 6 supplementary questions.

Workers in state statistics together with Soviet and economic organs will begin preparations to conduct the census for the republic population using a more exact definition of town boundaries, ordering of street names, numbering of blocks, houses and apartments, checks on accuracy and completeness in the registration of town and village residents.

In our republic, CSA, together with other institutions, in the time remaining prior to the census, is organizing explanatory material among the citizens to acquaint them with the tasks, procedures, and times for conducting the population poll.

A trial population census will take place in a number of rayons in the country for a thorough study of all its aspects and as a practical aid for workers of statistical offices who had not participated previously in such an endeavor in December 1986. It will be conducted at Valmierskiy Rayon. There are several reasons for this. The most significant one is that in Valmiera, an automatized territorial accounting system is being set up which will be used for data processing in the trial census. It is also noteworthy as a rayon with a varied industry and developed agricultural production.

CSO: 1828/103

DEMOGRAPHY

METHODOLOGY FOR COMPILING 1989 ALL-UNION CENSUS EXAMINED

Moscow VESTNIK STATISTIKI in Russian No 3, Mar 86 pp 17-22

[Article by A. Isupov, chief of the Population Census Administration of the USSR Central Statistical Administration: "Toward the All-Union Population Census of 1989"]

[Text] It was pointed out in the decision of the Politburo of the CPSU Central Committee published on 30 November 1985 that, in connection with the significant changes in the number, composition and territorial distribution of the country's population which have occurred during the last one and a half decades, it is advisable to conduct a routine All-Union Population Census in January, 1989. The Politburo has approved the government's proposals for the preparation of the census in the center and in the local areas. In the decree adopted by the USSR Council of Ministers on this question, the preparation and conducting of the 1989 All-Union Population Census, as of previous censuses, are being entrusted to the USSR Central Statistical Administration and its organs in the republics, krays, oblasts, okrugs, cities and rayons. It has also been assigned to conduct a trial population census, having covered approximately 800,000 persons, in 1986-1987 in order to test the plan of the program for the census, the organization, and the principles of its implementation and of the procedure for processing materials.

Population censuses have an important political and national economic significance in our country. In providing detailed data about the population, they help to clearly reflect present achievements in the development of society and to plan new paths for moving forward. After the Great Patriotic War, censuses were conducted in 1959, 1970 and 1979. The following was noted in the Greeting of the CPSU Central Committee and USSR Council of Ministers to the participants of the All-Union Conference of Statisticians in May, 1977: "The preparation and conducting on a high level of the 1979 All-Union Population Census is the responsible work of statistical organs. The census materials will be important

for drawing up plans for the further economic and social development of the country, and will serve as a striking example of the enormous success achieved by our people under the leadership of the Communist Party during the years of the Soviet regime."

The totals produced due to the successful conducting of the census indicated that the number of the USSR population is growing and great qualitative changes are occurring in its composition. The level of education is increasing, the all-around development and drawing together of the nations and nationalities is continuing, the social homogeneity of society is strengthening, and intrinsic differences between the city and countryside, and between mental and physical labor, are being overcome; shifts in the distribution of the population for the branches of the national economy, and for occupations, sources of means of subsistence and other indicators have been noted.[1] The results of the census were used widely during the drawing up of the plan for the economic and social development of the USSR for 1981-1985. They continue to serve as valuable data for scientific and practical work.

The routine population census will be conducted ten years after the last one. The results of the creative work of the Soviet people in the realization of the decisions of the 26th and 27th CPSU Congresses will be reflected in its results. A broad program of social measures will be implemented, a further rise of the economy, science and culture will occur, and the material and spiritual riches of the Soviet people will grow. In connection with this, the composition of the population will change, which naturally will be reflected by the materials of the impending census.

The decision of the Politburo of the CPSU Central Committee and the decree of the USSR Council of Ministers on the conducting of the 1989 All-Union Population Census are placing large obligations and great responsibility on the state statistical organs for the successful implementation of all the measures connected with its preparation, implementation, processing of materials and presentation of results. The accumulated experience of censuses in our country and abroad, primarily in the member countries of CMEA, is a good basis for the scientific preparation and organized conducting of a routine population census of the USSR. This experience indicates that an accurate and timely implementation of all preliminary works for the census serves as a guarantee of success. A number of problems must be solved. The main ones are to provide the appropriate subdivisions concerned with the questions of the census with qualified cadres in the center and in local areas, and to prepare the program of the census, basic organizational positions, and a plan for the

technology and procedure of processing census materials. The undelayed carrying out of these operations will create favorable conditions for implementing the final measures directed towards unfolding public information work among the population about the goals and tasks of the census, and towards issuing the tools of census-taking and supplying them to local areas, drawing up organizational plans, selecting and training census-taking personnel, and fulfilling other important operations determined by the USSR TsSU [Central Statistical Administration].

At the present time the USSR TsSU and the TsSU's of union republics are conducting an energetic preparation for the census. The draft of the census program is being discussed, or an enumeration of the questions which will be asked to the citizens, and according to the answers to them detailed information about the number and composition of the country's population and of each republic, kray, oblast, city and rayon will be received. The basic criterion in drawing up the program is the need of soviet and economic organs and of planning and scientific organizations for appropriate data about the population. The draft of this document is being worked out with the participation of workers of research institutions and scientist-demographers in conformance with USSR Gosplan and interested ministries and departments. In order to study changes in the number and composition of the USSR population in comparison to other countries, the questions of the program are being prepared based on the recommendations of CEMA and the United Nations for population censuses.

Finally the program will be prepared and confirmed by the USSR TsSU after the processing and analysis of the materials of the test population census. However, one can now say that many questions of the 1989 census will be similar to the questions of the previous 1979 census for the purposes of continuity with past censuses and in order to study the population in dynamics. We would remind you that the program then contained 16 questions, and of them 11 answers were received from the entire population (combined census) and 5 from 25 percent of the permanent population (sample census). These questions were included in the combined census: relationship to the head of the family (in order to receive data about the number and composition of families); sex; temporarily absent in the place of permanent residence or temporarily living in the whereabouts at the date of the census (in order to receive data about the permanent and present population); age; marital status; nationality; native language and another language of the peoples of the USSR which the person being questioned commands fluently; education;

type of educational institution (for students); source of means of subsistence. In addition, the following questions were included in the sample census: workplace (for the distribution of the population for branches of the national economy); occupation at this workplace; social group; length of uninterrupted residence in a given populated area; and for a woman--how many children she has given birth to.

During the discussion of the draft of the program for the new census, proposals stemming from the Basic Directions of the Economic and Social development of the USSR for 1986-1990 and the Period up to the Year 2000 are being introduced, in which it is indicated that a steady rise of the people's material and cultural standard of living has been and remains the highest goal of the party's economic strategy. It is further envisaged to conduct an effective demographic policy, and to universally promote an increase of the population's life expectancy and labor activity, the strengthening of the family, and the creation of more favorable conditions for educating the rising generation and for combining motherhood with the active participation of women in labor and social activity.

It is proposed to single out the following independent question in connection with the broad development of the industrial trade training of young workers in the program of the next census: "Has he graduated from an industrial trade education institution?" For the purposes of a greater compatibility of census information with the data of the current statistics, it is proposed to expand the question about marital status and to produce, along with data about de facto marriage, information about de jure marriage. The proposal introduced is not limited by the gathering of information about one source of means of subsistence. It is planned to supplement the question about the number of children given birth to with a question about the number of living children, and it is intended to use the formulation applied in the 1985 sample socio-demographic survey of the population for a more thorough study of population migration. The point of it is to explain the following; if a person has not lived here since birth, then what kind of populated area (urban or rural) did he come from. Data about the directions of population movement will be obtained on the basis of the answers: from a village to a city and from a city to a village, and from city to city and from village to village.

The additions mentioned will markedly broaden information about the population. In addition, on the basis of the experience of the 1985 sample socio-demographic survey of the population, the traditional statement of the question "relationship to the head of the family" has been changed to

relationship to the member of the family registered first" in the draft of the census program. The application of the idea of the "head of the family" at present has basically lost its original meaning in the conditions of the complete equality of rights of spouses and of the absence of their economic dependence on each other. Difficulties concerning who should be considered the head of a family often arose among members of a family, especially of young one, during the 1979 population census. The new formulation of the question has been tested during a sample survey of the population, during the course of which there were no difficulties with the answer to this question. A similar formulation is now being used in many countries and the use of it in population censues is recommended by international organizations.

For the purposes of saving expenditures and accelerating the receipt of results, the draft of the program of the future census, as of the former one, envisions the use of a sample method, that is, it is being proposed to receive answers to a number of questions of the census sheet not from the entire population, but only from a portion of it. The size of the sampling and the unit of selection will be determined during the further discussion of the draft of the program with regard to the experience of the 1979 census and the 1985 sample socio-demographic survey of the population. It must be noted that although the size of the sampling in the 1979 census was sufficiently large (25 percent), nevertheless only relative data were produced for administrative rayons with a small number of population, which could not fully satisfy the needs of management and planning on the rayon level.

It is essential to carry out a wide range of preliminary work in order to realize the census program, which will be confirmed after a careful discussion. They should all be implemented within the established deadlines without any kind of delays. V. I. Lenin pointed out the following in connection with the 1920 populationcensus: "Not one day of procrastination in the business of enormous state importance."[2] This is timely now.

The primary organizational measures for preparing for the census have been defined and the deadlines for their fulfillment have been established by a decree of the USSR Council of Ministers . Appropriate organizational measures with regard to local characteristics have been worked out in the union and autonomous republics, and in krays, oblasts, cities and rayons. Cadres which are capable of efficiently organizing the work have on the whole been selected in the USSR TsSU and its

organs in local areas. The membership of the Permanent Census Commission, the chairman of which is the chief of the USSR TsSU, has been confirmed for the operative solution of the methodological, organizational and other problems of the census.

During the three years remaining until the census, very important measures should be implemented. For the purposes of a correct distribution of the population into rural and urban, it is necessary to define more exactly the list of urban populated areas legally recognized as such.[3] The presence of the list makes it possible to conduct the following preliminary operations: to define more precisely the boundaries of urban settlements up to 1 July 1987 and to put in order the names of streets and the numbering of blocks, buildings and apartments in them; and on the basis of these data to make more precise or to compile new cartographic material--the plans of urban settlements and large villages and maps of rayons--before the beginning of 1988. The correctness and completeness of the current calculation of the population living in urban settlements and in rural populated areas should be verified by this period of time.

The implementation of the measures indicated will provide a basis for the compilation of lists of dwelling houses and of other housing accommodations in cities and large villages, and also of lists of rural populated areas with an indication of the population number. Such lists, together with cartographic material, are necessary for conducting a census zoneing, i. e., the separation of the territory of a rayon and a city into instructional and calculable segments and into census sections. This division ensures an organized execution of the census and the completeness of the inclusion of all populated areas and of those citizens living in them, and creates a basis for determining the necessary number of census-taking workers--counters, instructor-monitors heads of census-taking departments and their assistants, deputy chiefs of rayon (city) information and computer stations (centers) and inspectors of state statistical services for the population census. They are being drawn from enterprises, institutions and organizations for short periods of time (from 18 days to 3.5 months) for work in the preparation and carrying out of the census. In 1979, for example, in all about 900,000 persons were selected and confirmed in the ispolkoms of Soviets of People's Deputies and trained as a reserve, and 750,000 persons directly conducted the census.

The selection of the census-taking personnel is one of the most responsible stages of the preliminary work. The presence of qualified cadres is of crucial importance in any business, and especially in a census, taking into account the brevity of its execution, the temporary nature and stringent need to observe established deadlines.

Each of the census-taking workers will fulfill his functions in accordance with established norms. In 1979, for example, on the average in the USSR a counter took a census in 8 days of 630 persons in urban settlements and 530 persons in a rural locality. An instructor-monitor, who organized the work of 4-5 counters, checked the completeness and correctness of entries on census sheets by every counter. In addition, during the course of the census and after it, monitoring audits were conducted, as a result of which 305,000 persons were additionally counted in the country as a whole; this constituted 0.14 percent in relation to the total population.[4] It is proposed to maintain the monitoring methods which enable an accurate calculation of the population in the forthcoming All-Union Population Census.

It is extremely important that the information gathered during the census be processed within tight deadlines and that the results be tabulated. In the 1979 census, the first totals were produced and published in April of that year, and the processing of the materials of the census, the totals of which contain more than 200 million indicators in regard to a territorial cross section, was completed in the first half of 1981. In comparison with the 1970 population census, the time period for producing the data was reducedly markedly, and this was achieved primarily due to the application of the basically new form of the census sheet, which at the same time is a technical medium of primary information for its input into an electronic computer with the aid of optical reader "Blank-P" machines.[5]

Using this positive experience, the Population Census Administration and Soyuzmachinform of the USSR TsSU has adopted measures for the further improvement of the census sheet. For these purposes, measures have currently been adopted for improving the optical reader machines and a new version of the reader has been developed which interprets not only graphic marks, as during the processing of the materials of the last census, but also digital characters. This will significantly expand the possibilities for increasing the information content of the census sheet, accelerate the processing of

materials, economize funds, and in the final analysis raise the quality of the results of the census. By 1989, it is envisaged to equip the majority of the computer centers of the TsSU's of union republics and the statistic boards of ASSR's, krays, oblasts and cities with these devices. The 1989 census materials for oblasts with a relatively small population number can be processed, as in 1979, at group computer centers.

It is intended that the computer centers of TsSU's of the union republics and the statistic boards of oblasts will record primary information on a magnetic strip which will then be sent to the USSR TsSU Main Computer Center for the centralized totalling of the results of the 1989 census.

In the preparation currently being unfolded for the census, it is necessary to strictly observe the deadlines for the development of its program, form of the census sheet, technology for processing materials, and other documents for methodological and organizational problems. The timely carrying out of operations connected, in particular, with the printing of the census-taking tools and with the composing of of manuals for coding the answers to the questions of the census sheet about nationality, language, workplace and occupation depends on this.

Experience shows that great help is rendered by party committees, soviet and economic organs, trade unions, Komsomol and other public organizations in the conducting of the All-Union Population Census. The work of commissions for assistance to the census, which are being created within the Councils of Ministers of the union republics, ispolkoms of local Soviets of People's Deputies, large-scale enterprises and construction sites, sovkhozes, kolkhozes, institutions and educational establishments is having a great effect. Serious attention on the part of various organizations should be given to the problems of the impending census.

The organs of state statistical services, on which the responsibility for the preparation and conducting of the census has been placed, should introduce in good time appropriate suggestions for the development of these or other operations and display constant energy and persistence in fulfilling the plan of action.

One of the most important conditions for the successful carrying out of the 1989 census is explanatory work among the population about its goals, political and national economic importance, deadlines and procedure. In order to do this, it is essential to widely utilize the periodical press, radio and television, to organize oral propaganda

about the census questions, and to give lectures and reports, organize exhibitions and stands, and to use other forms of explanatory work. A brochure about the census will be published for the benefit of lecturers, speakers and agitators (more than a million of them participated in the explanation of the tasks of the 1979 census). Without a doubt, energetic public information work among the population will promote the success of the routine All-Union population census.

FOOTNOTES

1. See: "Chislennost i sostav naseleniya SSSR: Po dannym Vsesoyuznoy perepisi naseleniya 1979 g. Statisticheskiy sbornik TsSU SSSR" [Number and Composition of the Population of the USSR: According to the Data of the 1979 All-Union Population Census. Statistical Collection of the USSR Central Statistical Administration], Moscow, 1984.

2. V. I. Lenin, "Polnoye Sobraniye Sochineniy" [Complete Works], Vol 51, p 352.

3. The referral of populated areas to the category of urban ones is implemented in accordance with the situations of each union republic where the norms of the number and composition of the population have been established, and other signs, in the presence of which the populated areas can be treated as cities or urban-type settlements, have also been indicated. For example, populated areas with a number of inhabitants of not less than 12,000, under the condition that workers and white-collar employees with their families constitute not less than 85 percent of the number of the population, are treated as a city in the RSFSR; in the Ukrainian SSR, populated areas with a number of inhabitants of not less than 10,000 are considered cities if the overwhelming majority of the population is not agricultural.

4. "TsSU SSSR. O predvaritelnykh itogakh Vsesoyuznoy perepisi naseleniya 1979 goda" [The USSR Central Statistical Administration. On the Preliminary Results of the 1979 All-Union Population Census], Moscow, 1979, p 16.

5. See: "Sovershenstvovaniye gosudarstvennoy statistiki na sovremennom etape" [The Improvement of State Statistical Services in the Modern Era], Moscow, 1979, pp 127, 128, 134, 135, 229-233.

12810
CSO: 1828/99

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